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THE MORAL FABRIC OF THE OFFICE: ORGANIZATIONAL HABITS vs. HIGH-TECH OPTIONS FOR WORK SCHEDULE FLEXIBILITIES

by

Constance Perin

WP 2011-88 May 1988

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This analysis of the influence of information technology and culture on the location and scheduling of professional and technical work in U S organizations is part of a two-country study funded by the Management in the 1990s Program. Prof. Lotte Bailyn, Professor of Organizational Psychology and Management at the Sloan School of Management did research in the U K (Bailyn 1987, 1988a). Comments are welcome; please address the author at the Sloan School, E40-257.

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FOR WORK SCHEDULE FLEXIBILITIES

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Constance Perin

PART 1 INTRODUCTION
HABITS AND OPTIONS

Over the next decade, the employment of professionally and technically trained workers will be increasing at a higher rate than that of all other white-collar employment. Reflected in their career goals and the kinds of jobs and salaries they seek will be their sense of themselves as responsible and skilled and as being eligible not only for intrinsically interesting jobs. Their higher pay also reflects the autonomy, judgment, and discretion they and their employers expect their jobs to require. Their schooling, their professional socialization, and their reading of the American dream has led them to expect work offering greater autonomy than other white-collar workers and, certainly, blue-collar workers can expect.

Their expectations of autonomy may or may not be realized on the job, but they are as likely as most other American workers to have little or no choice over the places and times of work. Why, many professional level workers are asking, do I continue to go into the office every single working day when I can get so much more done by staying home a couple of days a week? With an ever-widening array of high-tech tools, spending every day at the office is beginning to make less and less sense. Electronic and voice mail, electronic conferencing, and joint online editing allow people to work

collaboratively and cooperatively at a distance, across time zones, and at times and places of their choice. These new ways of working offer greater control over interruptions, work schedules, family obligations, and leisure. Especially when the commute is long or the weather bad, but in any case, many are realizing that "telecommuting" makes it possible to tailor their weekly time more effectively, yet without giving up face-to-face discussions, the sociability of the office, or daily contacts with their networks. There may be "a place and a time for everything," but the wheres and the whens are no longer as predictable, or as limited, as they once were.

As appealing as this late 20th century logic may be, what stops most men and women from acting on it is a system of organizational norms, customs, and habits which both they and their employers have had little reason to question until now. American managers and employees remain under the influence of mid-19th century beliefs about work discipline and control, which hinge on all workers being together in the same place, at the same time. As specializations have deepened and their coordination has become more problematic, synchronization and co-presence have been the organizational strategies of choice. Today's options are not unlike preindustrial habits, in fact, when work times were less standardized and craftsworkers were more often at home. Only gradually have home and work been increasingly compartmentalized.

At the same time as high-tech tools suggest new options, there is growing interest in alternative work schedules and employment arrangements -- part-time work and job-sharing without career penalties, parental leaves, shorter work weeks and longer vacations,

flextime schedules. The storage, retrieval, and communication capabilities of high-tech tools may also make these alternatives more feasible.

By fiat and by tradition, the coordinates of space and time have stood as surrogates for individual discipline and organizational control over the continuity of productive processes. Now that they are becoming matters of choice, these beliefs and practices reveal new textures in the moral fabric of the office -- that is, how our shared understandings of trust, loyalty, solidarity, equality, respect, commitment, and reward influence careers, organizational design, job satisfaction, and productivity. Every proposed variation on established place-time work habits is a catalyst for reconsidering the significance of these meanings to every dimension of the office. High-tech options and work schedule alternatives only force us to ask whether today's beliefs and habits represent valuable traditions we want to keep or cultural lags we want to get ahead of.

In posing that question, this study also begins to redress an imbalance in research on the social and organizational consequences of advanced information technologies. Studies have tended to focus on the mechanization and routinization of work carried out by lower level workers in offices and factories and the deskilling or downgrading of middle level supervisors and managers. As the "information revolution" began, organizations automated routinized procedures, and that research emphasis followed. Theory and research have therefore concentrated on such consequences as worker displacement, depersonalization, routinzation, job dissatisfaction, and the ultimate "proletarianization" of the professions.

Whether and how professional level white collar workers might integrate new tools into improved productivity, career development, and job satisfaction has as yet been little explored (Hirschhorn and Farquhar 1985; Pava 1983b). As salient for professional level workers as for those on shop floors are issues of the quality of work life, organizational design, development of new skills, and productivity. Increasing the productivity of professional level workers whose labor costs are significantly higher would seem also to be a compelling cost-reduction goal. The second most important human resources management issue in the next few years is "improving productivity," according to a survey of about 600 U S firms (the first is reducing employee benefit costs) (The Conference Board 1986: 5). These workers will make up a higher proportion of the white collar work force than ever before. According to Bureau of Labor Statistics estimates, between 1982 and 1995 the numbers of jobs for clerical workers are estimated to increase between 4.4 and 5.4 million, compared to between 7.3 and 8.6 million for all "professional, technical, and related occupations" and "managers, officials, and proprietors" combined (U S Office of Technology Assessment 1985: 38).

One assumption behind this relative neglect of professional, technical, and managerial workers seems to be that because they have higher social status, they also enjoy better, if not the best, working conditions. Again, exploring the relation of habits to options may help to outline a more complete story about the nature of professional level work in the late 20th century. How high-tech tools mesh with careers and how they together affect American productivity and influence the occupational structure and the operations of internal

labor markets are singularly important issues in these times.

Of all types of work, aside from specifically research and development (R&D) work, professional level work processes are the least well documented in and of themselves. As a result, the details of their relationship to information technologies are unclear. By comparison with work on blue- and pink-collar workers, "ideas about how to improve the performance of 'knowledge work' [in offices] are scanty, and there are few systematic methods by which to analyze or redesign the way managerial and professional work is organized....The high-performance office as a general guide for exceptional performance of knowledge work remains embyronic" (Pava 1983a: 126).

Alternative work sites, schedules, and employment arrangements are today likely to be regarded by economists as being realistic only in tight labor markets for certain occupations and in industries dependent on a contingent labor force. To industrial relations specialists, these options are associated with quality of work life, personnel, and employee welfare issues -- which is to say, only indirectly associated with work processes themselves. Once considering the relationship of work habits to options, it becomes apparent that the design, performance, and quality of professional level work is interdependent with where and when it is carried out. No matter the extent to which that work or alternative employment arrangements rely on computers, that observation deserves attention.

That is, work place and time and all that they imply socially, symbolically, and functionally are in themselves fruitful subjects for reconsideration. With "the exception of the recent works of geographers...social scientists have failed to construct their

thinking around the modes in which social systems are constituted across time-space....It is not a specific type or 'area' of social science which can be pursued or discarded at will. It is at the very heart of social theory...and should hence also be regarded as of very considerable importance for the conduct of empirical research in the social sciences" (Giddens 1984: 110).

Catching a glimpse of American ideas about space and time in the ways that employees and employers respond to the social options high-tech tools make more feasible is like viewing an ultrasound scan of our cultural anatomy, revealing confusion, contradictions, and connundrums. By sorting out the logics of the cultural lag between habits and options, we will be learning much not only about contemporary organizations but about the moral fabric of the society we have and hope to have.

Study Strategy and Sources of Data

This research was designed to gain access to the place-time habits of American organizations. It was not intended to be a study of telecommuting, about which an increasingly informed array of handbooks and articles is now available. These suggest how organizations might develop policies covering this option and how managers can most effectively design and supervise telecommuters' work (e.g., Atkinson 1985; Cross and Raizman 1986; Kelly and Gordon 1986; Mills 1984).

It is instead a study of employers' and employees' ideas about this option. In addition, it is a study of the ways in which the human resources, industrial relations, public policy, organizational, and sociological literature has directly addressed the space-time

dimensions of work.

My focus on full-time employees of organizations was designed to exclude situations that reflect nonstandard employment arrangements, such as subcontracting or temporary work. And the focus on professional level workers excludes what is possibly the largest current population of telecommuters, namely lower level clerical workers performing data entry tasks at home; these workers are more likely to be women than men, often part-time. That overrepresentation reflects important cultural facts -- because women continue to have more domestic responsibilities even when they are working outside the home, the benefits of telecommuting are often associated more with women's needs than with men's. Organizations may play upon these cultural distortions, by offering alternative work schedule and site options, but then provide fewer employee benefits or less job security -- one form of (sometimes) mutual exploitation. Women's career goals are likely to be taken less seriously in any case, and then when they are working part-time, job-sharing, or working at home, they are at an even greater occupational disadvantage. In her studies comparing home-based with office-based systems developers within the U K, Bailyn finds that home-based women describe their work satisfactions in comparison to not working at all (Bailyn 1988a). In the U S, one study suggests that for clerical workers "the opportunity to work at home may be cherished, in contrast to not working, or working under less desirable conditions....Controvery over home-based work does not arise from the dissatisfaction of the current home-based workers themselves, but from the possibility of future exploitation" (U S Office of Technology Assessment 1985: 200; Christiansen 1988). While

these issues are not explored here, they are increasingly becoming the subjects of public policy research and of union opposition (National Research Council 1985: 152-153). One premise of this study is that men would experience the same benefits and costs as women would from the schedule flexibilities and the job satisfactions which place-time options may afford.

The data are derived from both original field studies and reports of others' research. In interviews with about 100 managers and professional level employees in a variety of United States industries and occupations, I listened to groups and individuals discuss the feasibility of an office-home work pattern and their informal experiences with it. This pattern is defined as regularly spending about two days weekly working at home and remaining in touch via various telecommunications devices ((e.g., telephone, call-forwarding, local area networks, electronic mail, computer conferencing). Discussions were held as well with managers and their employees whose office absence is essential to their work, but who require coordination and communication with a central office.

These women and men work in a variety of organizations: an old-line manufacturing firm in the steel industry; a company of engineers doing large-scale public works around the world; a multinational financial services company; management consulting organizations; a computer manufacturer, and a regional office of the Criminal Investigation Division of the Internal Revenue Service. Many occupations are represented: marketing, graphics, and financial specialists, civil engineers, software and systems developers, CAD supervisors, management information consultants, accountants. They

are higher level white collar workers in the primary labor market -- professional, managerial, and technical specialists who are organizationally employed full time (not those working as subcontractors, freelancers, or part-timers). Occupationally, the differences among their qualifications and responsibilities can certainly be significant (if they are not already combined into one job), but for the purposes of this study, the characteristics unifying them are their less routine tasks, the high communication and coordination demands of their work, their organizational embededness, and the higher levels of organizational trust they enjoy.

This study does not include professional level employees of educational institutions. An office-home pattern can be assumed to be part and parcel of both academic socialization and the job. Class preparation and schedules, committee obligations, office hours, and lab involvements by default create the organization's "attendance" policies. Although there are surely individual differences in locational and temporal preferences, this population by and large takes a greater degree of self-scheduling and self-management for granted than do employees of private and public organizations having "regular hours."

1) Office-Home Pattern

This pattern is not now widespread as a regularized work option. Most work being done at home today by professional level employees is overtime work -- the definition of this group being used here is office-oriented "workers doing cognitive tasks that require specialized knowledge gained through lengthy education, often with a graduate degree, or special certification or licensing" (U S Office of

Technology Assessment 1985: 52-53). Supporting this habit is the widely held belief that worker visibility is the same as worker control and supervision, as employers see it. From employees' perspective, they make an equation between their visibility and the possibility of promotion. As a result, most of the so-called telecommuting of professional level workers in corporations and government today consists of office overflow time, not substituted time.

Demographic analyses of the telecommuting population are handicapped by definitional problems; a 1985 Current Population Survey report estimates that of all employed persons not running their own business, about 6 per cent are "homeworkers," and of all owners of businesses, about 3.6 percent have home-based businesses (U S Small Business Administration 1986: 11D). That estimate does not, however, distinguish between corporate workers who are working overtime at home, those who are moonlighting or running a business on the side, and those who are substituting days at home for days in the office. Other evidence suggests that those who are substituting days at home for days in the office make up a very small proportion of the total (e.g., Telecommuting Review 1988: 15). No detailed occupational breakdowns are available.

A survey based on a random sample of 10,000 firms, members of the American Management Association, found that among several "work alternatives," flextime was among the ten most frequently used while work-at-home arrangements were among the five least popular (Goodmeasure, Inc.: 1985: 21). Organizations are likely to consider "homeworking" for lower-level clerical workers whose work has low

communication needs and is repetitive and routine, such as data entry and word processing; these can be "monitored, measured electronically, computer checked for errors, and paid as piecework" (U S Office of Technology Assessment 1985: 198). For professional level workers, an office-home pattern may be approved informally in extenuating circumstances -- for example, a long-time, valued financial analyst recuperating from heart surgery is allowed to work at home in order to reduce the stress of commuting in the New York metropolitan area.

The office-home pattern for professional level workers has most commonly been tried out in pilot projects in large organizations, and even where they have been judged successful, they tend not to continue or become integrated into organizational policy. The exceptions are in high-tech industries, mainly those in computer manufacturing, telecommunications, and software development. A new pilot effort in California state government will be trying to break out of this pattern; it will include employees in a variety of occupations making variable use of advanced technologies, working both in an office-home pattern and in satellite offices.

The positive consequences of office-home pilots are:

--the pattern enables employees to concentrate on particular tasks and get them done more quickly or thoroughly, thereby enhancing job satisfaction;

--employees can work intensively during that part of the 24-hour cycle that best meets their needs;

--they can use their weekly commuting time more productively;

--they can better coordinate work activities with familial responsibilities.

--managers report that they do a better job of planning work for employees who are not expected to be in the office every day, and they

stop being last-minute managers and arrange work and meetings to accommodate office-home schedules, habits they transfer to office-only workers too.

In its essentials, the office-home option combines social interaction requirements and pleasures with these workers' expectations of self-management and a preference for controlling interruptions. By no means can high-tech tools substitute for the qualities of face-to-face discussion and the sociability of being at the office with colleagues and friends.

This and other studies show that most employees know enough about their work and their organizations to know that they won't want to make place-time substitutions every day. Pilot studies also show, as would be expected, that working at home for a few days out of the regular work week is an option some are unlikely to exercise: those whose tasks are more social than solo, those who have limited space available at home, those with preschool children, and those who acknowledge that they are unable to work productively outside of an office environment. Many employees do not want to erase the boundary between home and work -- Americans value their privacy and leisure too much for that. A computer scientist will not keep a computer at home because he finds that he overdoes it when a machine is around. Yet he regularly schedules at-home days for catching up on his reading. However, studies also show that managers who will not even consider allowing an office-home pattern continue to expect exempt employees to work "long days," indifferent as to whether they do so at office or home, weekdays and weekends. The office-home boundary is, then, impermeable organizationally and individually only under particular

conditions.

An office-home work option is likely to become more technically feasible in the 1990s. Increasingly sophisticated ways of dealing with data access and security and lower cost communication devices are on the horizon. It will also become more individually feasible in a larger population habituated to using computers. The demand for work flexibilities that blend with family life, community involvements, leisure interests, and changes in spousal responsibilities will accelerate (Yankelovich 1981; Bailyn 1988b). As the size of the contingent workforce increases, the incidence of telecommuting and schedule flexibilities among subcontractors and temporary workers may also increase. Under what conditions these options will be realized through organizationally adopted policies that affect the primary labor force remains the question it has been since the earliest work on this aspect of the subject (Olson 1982).

Because work is inherently cooperative and social, this study has assumed from the outset that employees would spend only some part of the regular work week at home. In performing the complex, interdependent tasks associated with professional level work, face-to-face communication is irreplaceable; the place-time logic of the new technologies only raises questions about its universal necessity. In-person meetings are likely to predominate in the early phases of a project, for example, when problems are being defined and priorities assigned. Meetings also construct the trust and confidence on which future interactions rely. With a choice of media, face-to-face meetings are likely to be fewer and more purposeful.

An important aside at this introductory point: in the matter of

family obligations, working at home is not automatically compatible with also providing child care. Families with adults working at home find that they must still arrange for the care of awake preschoolers if working time is to remain uninterrupted. What parents of older children are able to do, however, is to shape their working hours around children's return from school and their after-school activities and appointments; they may work earlier in the morning and later in the evenings, during the time they would spend commuting. Working at home is often regarded as an option that appeals mostly to women, since they have traditionally been the parent most responsible for children before and after school hours, but preference for this option does not appear to be gender related.

2) Field Forces

A second fieldwork strategy focussed on workers whose continual office presence is not required in their jobs, in order to gain access to current organizational norms, conventions, and techniques. These also suggest some of the general issues involved in managing work and workers across space-time boundaries. The two cases reported here consist of field auditors working for the Internal Revenue Service and information systems consultants who work from their employers' offices and perform most of their work at client sites. In a master's thesis carried out with my guidance, Robert F. Violante conducted interviews with 31 female and male management information system specialists in one US organization of international consultants (Violante 1987). The data cited in this analysis are quotations or paraphrases from those sources as well.

I did not seek out sales forces, by definition field-based,

because their work discipline is controlled by weekly or monthly sales reports. By comparison to those governing office workers, such productivity measures are unambiguous. That ambiguity is an important source of organizational resistance to an office-home work pattern. In office-oriented work, managers believe, they can reduce productivity ambiguity by observing employees at their desks and in the office.

Overview

Throughout, I am suggesting that the tensions between technological innovations and organizational receptivity can be issues more of meaning than of function, more of convention than of reasoned analysis, more inexplicit than acknowledged. Whatever new technologies and new social patterns may promise, their reception is under the control of the beliefs with which this culture constructs the meanings of space and time: its ideas about discipline and control, work and home, status and deference, and others yet to be considered. Until these ideas are rethought in their modern contexts, new approaches may never be allowed to realize their promise. Not all that information technologies promise is automatically desirable, of course -- ethical issues of possible abuse through expanded opportunities for monitoring and surveillance, for example, remain (U S Office of Technology Assessment 1987).

The complex patterns that American place-time habits weave into the moral fabric of the office are reflected in the paper's range of topics. Part 2, "The Space-Time Geography of Professional Level Work" maps out some of the ways that American organizations construct their understandings of space and time and manipulate these resources. The

conceptual boundaries between "home" and "work" and between "office" and "field" are explored, to help understand the cultural difficulties of bridging them. Part 3, "Invisible Rungs: Place-Time Dimensions of Work Evaluation and Career," traces out the many ways that place-time understandings intersect with both long- and short-term interests of both individuals and organizational employment systems. Both careers and daily work processes are much under their influence, in ways we may have only dimly realized. How traditional and high-tech organizations differ and how that may result in a different organizational sociology is one important issue. For example, high-frequency computer users are more likely to be already habituated to place-time options.

Part 4, "Place-Time Independencies in Bureaucracies" gives a name to the new kind of associations which networked computers give rise to, transcending both organizational boundaries and time zones. "Social fields" are new kinds of groups which can be seen as being both organizationally productive and subversive, sometimes enjoying high legitimacy, sometimes low. They are another element of a new organizational sociology. Part 5, "Conclusion: Habits, Options, and Productivity" proposes that one approach to improving productivity is to reconsider the assumptions, symbols, and myths on which organizational habits of many kinds rest, in order to be able to choose which to keep and which to move beyond. The informed choice of both habits and options is the important question, not whether an office-home pattern of work, or any other kind of alternative work arrangement, should be more widespread. That choice depends on how the moral fabric of the office is to be shaped.

PART 2

THE PLACE-TIME GEOGRAPHY OF PROFESSIONAL LEVEL WORK

Organizational theory and managerial practice have been reluctant to question the conventions and norms governing work times and places. Geographers and transportation specialists have shown the most curiosity, hoping to relieve commuter congestion and lower highway construction costs with flexitime alternatives that would break the 9-to-5 habit. A recent study is the first even to explore American temporal habits within the workplace; it suggests that temporal perceptions, which include locational perceptions as well, run along these dimensions: "the adequacy of the allocation of time for tasks, various aspects of scheduling (including punctuality, deadlines, and the sequencing of tasks), temporal buffers in both the workday and in planning, the synchronization and coordination of work with others through time, the perceived amount of routine in the job over time, temporal boundaries (both within the workplace and between work and nonwork time), the amount of autonomy over the use of time at work, the speed and pace of work, the awareness of using time as a resource, and the future orientation of the organization" (Schriber and Gutek 1987: 14). Research relating these perceptions to differences across occupations and industries, for example, remains to be undertaken.

Of course the basic sociology of organizations is a product of temporal distinctions: "exempt" workers are not paid for overtime work, and, by law, "nonexempt" workers must be. Both time and space are embedded in prevalent images: the "ladder" of "careers," moving upward through social space and social time; the "frontiers" of opportunity in the American dream of wide open spaces and historical

progression. Images of organizational power and prestige also rely on place and time. The "top floor" indexes high status in a social or functional hierarchy and, more subtly, a distancing from the mundane concerns of others. Controlling the time allocations of others also indexes occupational status (Jaques 1982), and informally as well: the chairperson who arrives late legitimates a position and maintains authority simply by having kept others waiting; the manager who keeps a desk between herself and subordinates emphasizes her authority. Such interpersonal manipulations of space-time resources are by now commonplaces (Goffman 1967; Hall 1959, 1966). Their more structural and far-reaching social implications are the concerns here.

Space-Time Conventions and Norms

Only 12.6 percent of US organizations in the private sector and 11.3 percent of the public sector have adopted some form of "flextime." As of May 1985, according to a Bureau of Labor Statistics report, just over 12 percent of full-time wage and salary workers are on a flexible schedule. Of all employees classified as managerial and professional, just over 18 percent participate; the next highest occupation is "sales," at just under 20 percent. "For some more detailed classifications, the incidence was more than 30 percent, such as mathematical and computer scientists; natural scientists; technicians, except health, engineering, and science; and sales representatives (commodities except retail). The incidence was higher for men than for women for each occupational, age, and race or Hispanic category" (Mellor 1986: 19). Even though white-collar professionals rate their interest in participating in policies concerning "when the work day

begins and ends" at a significantly higher level than blue-collar workers do (Kochan, Katz, McKersie 1987: 211), their options remain surprisingly limited.

The figures on numbers of workplaces having policies for alternative work schedules are somewhat higher than those for numbers of workers participating, as the figures in Tables A and B reveal (U S Bureau of Labor Statistics 1988). Of all private establishments with 10 or more employees, just under 44 percent offer flexitime; of government offices, just under 38 percent do. The variations by industry and by size are, however, significant. In private industries that are "goods-producing," about 31 percent offer flexitime, compared to just under 48 percent in "service-producing" industries. In general, the larger the workplace, whether private or public, the lower the proportion offering flextime: about 35 percent of the largest private employers offer flextime, compared to about 45 percent of the smallest; about 36 percent of the largest government offices do, compared to about 41 percent of the smallest.

Moreover, true versions of flextime remain scarce, programs by which employees may, within a specified window. vary the times at which they arrive at and leave the workplace, e.g., between 7 and 9 a.m. and 3 and 5 p.m. Most versions instead require that employees choose specific times of arrival and departure within a particular window, without daily variation and without being able to change schedules for a period of several months. To determine which of these were most desirable for both employees and employers, one study examined three state agencies where "considerable professional interaction" was required. One agency offered a staggered fixed

Table A. Private and government establishments with 10 employees or more by type of child-care benefits, and/or work-schedule policies aiding child care, Summer 1987

Child-care benefits and work-schedule policies	Private Industry			Government
	Total	Goods-producing	Service-producing	
Total establishments (thousands)	1,128	272	856	74
Percent providing child-care benefits or services	10.1	6.3	11.3	26.4
Employer-sponsored day care	1.6	.3	2.0	9.4
Assisted with child care expenses	3.1	1.9	3.5	2.9
Child-care information and referral services	4.3	2.3	5.0	15.8
Counseling services	4.2	3.0	4.6	18.2
Other child-care benefits	.9	.6	1.0	2.3
Percent with work-schedule policies aiding child care	61.4	51.3	64.6	57.2
Flextime	43.6	31.3	47.5	37.5
Voluntary part time	35.3	22.4	39.4	26.7
Job sharing	15.0	9.0	16.9	23.5
Work at home	8.5	8.2	8.6	4.0
Flexible leave	42.9	37.3	44.6	43.7
Other leave or work-schedule policies	1.8	1.3	1.9	7.1
Percent with no child-care benefits or policies aiding child care	36.6	46.4	33.5	39.6

NOTE: The individual categories will sum to more than 100 percent because many employers provided more than one benefit or policy.

Source: Bureau of Labor Statistics, January 15, 1988: Report on Employer Child-care Practices.

Table B. Private and government establishments with 10 employees or more by size of establishment, type of child-care benfits, and/or work-schedule policies aiding child care, Summer 1987

Child-care benefits and work-schedule policies	Private Industry			Government		
	10 - 49 employees	50 - 249 employees	250 employees or more	10 - 49 employees	50 - 249 employees	250 employees or more
Total establishments (thousands)	879	213	36	40	23	11
Percent providing child-care benefits or services	8.3	14.1	31.6	24.1	27.2	32.7
Employer-sponsored day care	1.5	1.8	2.7	10.2	6.1	13.2
Assisted with child-care expenses	2.4	4.9	10.3	2.5	2.8	4.3
Child-care information and referral services	3.6	5.5	14.6	17.9	14.1	12.0
Counseling services	3.1	6.5	17.0	18.6	17.9	17.4
Other child-care benefits	.7	1.5	2.7	1.5	2.9	3.7
Percent with work-schedule policies aiding child care	62.2	58.6	58.5	57.9	53.7	62.0
Flextime	45.3	38.3	34.7	41.1	32.1	35.5
Voluntary part time	36.3	32.9	26.2	29.8	23.5	21.7
Job sharing	15.6	12.7	13.5	24.4	22.4	22.6
Work at home	9.4	5.7	4.0	4.2	4.1	3.4
Flexible leave	43.7	39.9	39.6	46.2	39.9	42.2
Other leave or work-schedule policies	1.6	2.5	3.0	8.4	6.8	3.3
Percent with no child-care benefits or policies aiding child care	36.5	37.6	33.1	40.2	43.0	30.7

NOTE: The individual categories will sum to more than 100 percent because many employers provided more than one benefit or policy.

Source: Bureau of Labor Statistics, January 15, 1988: Report on Employer Child-care Practices.

schedule (arriving between 8 a.m. and 9:30 a.m., and leaving as soon as 8 hours after arrival), which employees could change quarterly; a second agency offered a flextime schedule which allowed employees to arrive between 7 and 9 a.m. and depart any time between 3 and 5 p.m., after working a 7.5 hour day, which employees could vary daily; the third agency was the control group, where everyone was on a fixed, 9 to 5 schedule. The "employees working the true flextime schedule did express significantly higher rankings of their work environment than did employees working staggered fixed schedules or standard fixed hour schedules" (McGuire and Liro 1986: 71). In responses to the question of whether their work schedules allowed them to work when they thought they were most productive, there were no significant differences among employees of the three agencies. But the more flexible scheduling appeared to have a "greater impact on attitudes" (ibid.: 73).

In a survey of 919 professional level employees ("scientists and engineers") in a variety of organizational environments in seven different industries, one item out of 104 to be ranked for its importance to their work was "having a system of flexible hours." For the age group 41-49, this ranked in the upper quartile; it did not so rank for other groups, and overall it ranked in the upper quartile for men and not at all for women (Personnel Administrator; Susan Manring, personal communication). I discuss the significance of those data in Part 3.

Various institutional impediments to the wider adoption of flextime among nonexempt employees may inhibit employers from introducing this alternative to exempt employees in the interests of a uniform organizational policy. The Walsh-Healy and Public Contract

Acts and the Fair Labor Standards Act, together with union overtime rules, which were originally designed "to reduce the length of working hours...now stand in the way of more employee choice over hours; they prevent the employee from working a nonstandard schedule of his own choice" (Owen 1979: 105). In 1978 Congress passed the Federal Employees Flexible and Compressed Work Schedules Act, but despite "increasingly favorable interest in the new work scheduling techniques, a long time may have to pass before Americans modify their laws to accommodate such innovations" (Ronen 1984: 219). Current federal regulations for reporting hours and charges may also be preventing firms doing government business from adopting flextime.

In discussions about this study with colleagues as well as with those being interviewed, despite my having specified that the office-home pattern would consist only of a couple of days a week of working at home, their first responses were often to an image of being out of the office all the time. I take this to be additional evidence for the strength of the norm and the difficulty even of conceiving an alternative to it. "How would employees be socialized and their abilities developed if they weren't in the presence of their peers and managers?" Or: "There's a synergistic kind of information exchange that happens in person. People feel that, anyway. A lot of informal networking and strategizing happens just by walking down a hall. You only get that by coming in to the office." Although these events would not occur five days a week, I would have to point out, they could on three; the decrease in opportunities might also make them more valuable.

Both the telephone and meetings dominate the daily time of professional level workers, as Table C documents. These index organizational expectations of co-presence and synchronous communication. What those data do not also reveal is who has control over daily time allocations. One of the most important options computer-aided communication offers is freedom of choice of when and where to receive the message that might otherwise have been the interrupting phone call or visit. Practical advice to managers for making the most of their working time puts at the top of the list several strategies that computer-aided communication, whether at the office or at home, could support: for example, insulating or buffering oneself from incoming communications; isolating oneself by physical withdrawal to eliminate interruptions; delegating specific activities to others; and simplifying written communications by telescoping receipt and reply; reconsidering choices made between written and verbal communication (Webber 1972: 157).

One study of the first 18 months' use of an electronic mail system at The Rand Corporation found that on average about 45 percent of the 69,000 messages were to others within the immediate physical environment, and not, as expected, preponderantly to those more distant (Eveland and Bikson 1986: 97). Although the authors do not explain this, my field studies and the data on use of time suggest that this pattern may represent respect for others' time and/or frustration at being unable to speak to people in the vicinity who are unavailable in meetings or on the phone.

Within the office, higher level professional employees are often

Table C. Managers' and Professionals' Use of Time.

Source	Number of respondents	Percentage of working day				
		Face to face	Phone	FTF & phone	Reading, writing	Total communication
Managers only						
Tegar	*a*	47	9	56	29	85
Stogdill & Shartle	470	60	—	—	—	—
Engel et al.	199	27	13	40	34	74
Stewart	160	54	6	60	28	88
Hinrichs	136	45	8	53	25	78
Burns	76	—	—	52	24	76
Horne & Lupton	66	54	9	63	24	87
Doktor	8	75	3	78	—	—
Dubin & Spray	8	55	6	61	5	66
Croston & Goulding	6	56	7	63	18	81
Ives & Olson	6	68	10	78	—	—
Mintzberg	5	64	6	70	—	—
Kurke & Aldrich	4	62	8	70	—	—
Kelley	4	61	—	—	—	—
Choran	3	36	17	53	—	—
Palmer & Beishon	1	54	6	60	15	75
Notting	1	—	—	59	17	76
Professionals only						
Case Institute	1500	—	—	—	—	53
Tegar	*a*	23	17	40	42	82
Engel et al.	130	10	11	21	30	51
Hinrichs	96	25	5	30	27	57
Managers & Professionals						
Xerox	17,000	18	5	23	47	70
Booz-Allen	*b*	—	—	46	21	67
Managers, Professionals, and Secretaries/Clerks						
Klemmer & Snyder	*c*	35	7	42	26	68
Bair & Nelson	175	26	14	40	21	62

[a] 5,300 questionnaires and personal interviews for managers and professionals combined.
[b] 90,000 time samples for 299 managers and professionals.
[c] 3,132 time samples.
Sources: Refs. [8,24—44].

Source: Panko 1984: 222.

away from their desks and out of sight of immediate supervisors. Financial analysts, marketing specialists, consultants, technical authors, systems developers, engineers do some of their work off-site at customers' or branch offices, for example. These loci all are linked now by phone at the least. Moreover, the "office population" for which managers are responsible is increasingly bursting organizational boundaries to include subcontractors, who may be working from home or in the offices of smaller organizations, or working on-site but in organizationally peripheral locations.

As employees and managers often see it, putting in an appearance at the office is bound to lower their productivity and their job satisfaction. Working with about 50 others in an open-plan office, a civil engineer describes his days as being "pretty chopped up" with interruptions. "You end up managing the chops instead of the work that's between the chops." "It's futile to try to do thoughtful work in the office, or to write a report or proposal. I do that at night, at home," says an information systems designer. "I send my people home to get their work done." says a manager of authors of in-house training courses. A financial analyst: "When I work at home, I tell my secretary, 'Put all my messages on voice mail. If it's urgent, call me.' I check voice mail and disregard the messages I don't want to deal with until I'm in the office. With fewer interruptions I'm more productive at home -- I also save the commute time. You can put in six hours at home and you get the same thing accomplished as if you worked the whole day in the office. It's totally unproductive around here."

Employees in all types of jobs prefer work spaces that are

"'enclosed and visually inaccessible'" (Davis 1984: 274). It is not surprising that studies of "open plan" office designs find that noise increases, privacy decreases, visual distractions multiply. The communication that open plan designs were said to improve can just as readily deteriorate. Within the office the environment could be designed to accommodate the rhythm of tasks alternating between social and solo (Stone and Luchetti 1985).

How work place and time affect their productivity and job satisfaction is no mystery to professional level workers. Moreover, they are ready, willing, and able to build their own personal deficits into performance criteria. One of the most striking qualities of my interviews is employees' self-awareness and their willingness to assess themselves and their optimum working environments openly. Some candidly say that they could never work at home because they would be at a loss without the social and physical structuring of the office.

Both employees and managers are readily able to define their work as naturally dividing between cognitive and social demands. "We need to be quiet and think 75 percent of the time, and the remaining 25 percent or so we need to be in social settings and communicating," says a manager in a civil engineering firm. They know which settings best fit each kind of work: the "office" appears to be the least productive environment for concentrating, the most for collaborating. Next to having an office with a door to close and freedom from telephone interruptions, home is the most favored location for periods of concentration, followed by airplanes and hotels.

> "I think most of the production work that you have to do ends up getting done at home, anywhere from a plan to a memo to whatever."

"Whatever there is that is administrative, by which I mean, you know, figuring out that members of the practice area are busy or not, everything from that to filling out my expense reports, I do at the office. Also I'll have all my meetings, of course, and that's pretty important. I do almost no thinking at the office. Time just does not permit thinking to be done here, and so I do my thinking at home. Being interrupted as frequently as I am, as we all are, either by the phone or by people coming in and wanting to talk, makes it every difficult to establish a program of uninterrupted thought. When I say 'thinking' I'm talking about -- you know I try to do some very, very, deep, long, soul-searching kind of thinking, I just don't like to be interrupted."

Consultants who must travel in order to get their work done are likely to be speaking as well for office-bound employees whose jobs also require much travel:

"I think there are basically four work locations: The office here, at a client's, airplanes and airports, and at home. What goes on with a client is typically discussions, interviewing. What goes on at the office is meeting after meeting of a variety of topics that can be client-related, but mostly not client related. What goes on in airplanes is reading. If there's a big rush, you write a proposal on an airplane, but typically you read on an airplane. And at home all the other things that you can't get done in the office -- and you name it -- it's done at home."

"There are different locations for my work. There would be the office environment and the way this office is structured. There is my personal office, and then there is a PC lab. Then, outside the office environment there would be home, restaurants, client sites. And I would say there's been a great deal of variation between the times when I'll be traveling frequently and when I'm traveling infrequently. And when I'm traveling frequently I would say that the office is used very little for anything other than rote maintenance type of work: filling out forms, handing in things to be typed. During those heavy travel times there's another one: hotel room. During those times the hotel room serves as an area to do writing of documents, consideration alone of what's happened during the day; and other general catch-up work. Dinners during those times, depending upon who I'm traveling with, can often serve as time to plan the next day or the next week's activities and hearing, or else are used as a meeting time with the client or with some other party. The client site during that time serves as a place primarily to gather information. I don't tend to be able to work on a client site doing production of reports very well. I find that very difficult. And if I have to

> produce a report during work hours, I would rather go off and go to the hotel and work on a portable computer than to work on the client site."

Not that organizations are unaccustomed to their workers' being located in different time zones or away from a central office. Organizational decentralization into regional, branch, and international offices are familiar forms of place-time dispersal. Reporting requirements, coordinating councils, or newsletters are customary control devices for monitoring and coordinating. Within organizations, the architecture of functions and the locations of work groups create an internal geography, and computer-aided communication is becoming as essential as the telephone and meetings. Employees working in project teams, for example, need external connectivities "that will enable them to stay in touch with developments in their specialties," while those whose primary allegiance is to a functional department yet "matrixed" to a joint effort need an internal "coordinating technology" that can augment or substitute for telephoning and meetings (Hauptman and Allen 1987: 22; Sundstrom 1986).

The Cultural Divide Between Home and Work

Despite the ubiquity of overtime work done at home, "This office-home pattern is just not a respectable idea for management to entertain," a financial analyst declared. American ideas about "home" depend on our understandings of leisure, idling, privacy, choice....all antitheses to the buttoned-up premises underlying "work." What we do at home, we do for love, the saying goes, not for money. There is a general lack of managerial trust that people working at home are actually going to be working. One valued manager of a systems

development unit in a large financial services company sought to arrange an office-home schedule in order to settle her infant daughter into a day care routine, and while the company was responsive and helpful, the arrangement had to be based on an explicit "contract" of her duties and obligations and how she intended to carry them out. It was assumed that her commitment to these obligations -- which was never questioned in the office -- would attenuate once at home.

Employees also see the boundary as being inviolable:

--"I don't even have a staple remover at home."

--"I even feel guilty reading trade magazines in the office."

--"There's also a negative aspect about working at home. Last year, I took the computer home. Well, I didn't see my family for the whole vacation. There's a tendency to get enthralled in what you're doing, and actually it can detract from your home life. You overproduce. Give the company more than what they're due."

--"I think it would be difficult to separate family life from work life. I think you would have to do some definite things to tell yourself you were doing work now: go to a specific room and work on a specific desk and call that off-limits. When you leave the room you have left work."

The division between home and work respects cultural lines that, some have said, factory industrialization laid down (Thompson, E.P. 1967). Breaking through those lines is often cause for disquiet, as when dentists, doctors, accountants, or architects request zoning permits for home offices and their neighbors express their social discomforts vociferously at local public hearings. Within the last two years, Time, Inc. put out a first issue of a new magazine called Home Office, aimed at the increasing population of small business startups and self-employed people, but there's never been a second.

Just how rigid these lines actually have been in the uneven

course of industrialization is a new subject for debate among labor and social historians. One proposes that a "plurality of time-reckoning modes...have continued to operate in industrial societies [which] relate not only to the clock or machine but also the cyclical patterns of season, family and life-course, as well as the diverse perceptions derived from various social groupings inside and outside work" (Whipp 1987: 235). Today, the extent to which there is a mutual influence between spheres of work and home appears, first, to be generally limited, and second, to be industry dependent, as the data on child care facilities and flexible work schedules and sites illustrate (Tables A and B).

One study of computer professionals found that about 35 percent thought that working at home would worsen their relationship with a spouse, about 31 percent thought it would have favorable effects, and the remainder didn't think it would have any effect (Salomon and Salomon 1984: 25). That employers will intrude on this strictly private domain is often raised as a point of both organizational and individual resistance to the office-home option. This particular objection calls attention to the other ways in which employers already encroach on the home domain. Housing location and its commute, spouse's employment, children's education are all accepted elements of an employment package. But less explicit are the social expectations placed on families -- to participate in company social events, to arrange vacation schedules around company schedules, to accommodate to overtime demands and heavy travel schedules.

Home as a cultural construct is regarded as being "work-less" perhaps because, for housewives, it is also wage-less. As the locus

of domesticity, home is the site of the cleaning and cooking activities which are associated with women: the workplace is "masculine," "home," feminine, a system of meaning that may also account for the reluctance of organizations to participate in child-care programs. These associations resonate the wider social ambivalence toward women -- there may be no place like home, but there is also nothing culturally simple about home: the multinational corporation's "Home Office" and our own "home office" have little in common, and not only as the IRS sees it.

Crisis, Speed-Up, and Slack

The space-time geography of organizations is incomplete without observations about the pace of events and its wider implications. Given weekly, monthly, quarterly deadlines, most organizations experience times of crisis that put employees under the gun. The myths, rituals, symbols, and sources of crisis management are an important part of this story of habits and options. Who has the most and least control over the pace and urgency of events? Whether chronic or cyclic, how do high tech tools for coordination and communication fit into this system? Do they exacerbate, anticipate, or relieve crises?

> Do similar departments (e.g., legal divisions, sales departments) across organizations have similar temporal norms? Are similar functional units across organizations more similar than two diferent functional units within the same organization?....Do temporal norms apply throughout the organization or do they vary with level of hierarchy, i.e., do executives adhere to different temporal norms than clerical workers, is time allocated well in engineering but poorly in manufacturing? Is autonomy in time use restricted to certain departments or occupations within the organization or are all units subject to the same temporal norms? Should they all be subject to the same norms? Which

> is associated with better performance, heterogeneity or homogeneity of temporal norms? How much latitude does the individual manager have in setting temporal norms or in changing them?....Are some work groups "out of synch" with respect to temporal norms, and what are the implications of their uniqueness?" (Schriber and Gutek 1987:

One study of six information systems managers' daily routines found that on average, they spent 77 percent of each day "in some form of oral contact. 68 percent of the day was spent in face-to-face contact. Although they spent almost half (48%) of their day in scheduled meetings, all other activities were short, averaging less than nine minutes in duration, and were interrupted frequently. They averaged sixteen unscheduled meetings per day; these were typically unexpected interruptions lasting five minutes or less. Managers had some control over this hectic, highly interactive schedule; they initiated over half of the oral contacts they made" (Olson 1982: 76).

Those findings suggest two divergent possibilities: one is that managers might be able to use information techology to control the other half of their contacts, especially the interruptions; the other is that these very schedules account for managers' resistance to having subordinates who aren't visible and available to put out some of these fires. That is, managers' schedules and crises, real and imagined, are likely to account for their insistence on employees' continuous presence and a single norm for arrivals and departures.

At a worldwide engineering firm, employees representing several functions -- accounting, marketing, engineering -- felt that the crises they were asked to handle were, more often than not, a consequence of poor managerial planning and not genuinely unforeseen problems. Given the frequency of these quasi-crises, however, they

felt that working at home a couple of days a week or protecting themselves from interruptions within the office was just not possible.

Time-saving is a premium high tech tools offer, but this can also translate into a "last-minute" mentality. A graphics manager in a firm of civil engineers refuses to tell his internal customers that he can produce their slides on his computer in ten minutes: he's learned that if they have to wait a few days for them, they tend to think a presentation through ahead of time, instead of waiting until the last minute. Speeding up operations is also expected to result in employee "slack" time. The drafting department in an old-line manufacturing firm went on a three-shift schedule after purchasing several expensive computers, the first time that shift work had been introduced among its white-collar workers. On the second shift, the supervisor recounted, because his group was out of the "hustle and bustle" of daily interruptions, it had the extra time with which to explore the CAD possibilities. The group soon developed several unusual applications, which were incorporated on all shifts. At TIAA-CREF, where professional level employees account for one third of the workforce and "more than half of the total salary budget," a productivity improvement program streamlined the more routine aspects of their work (those where time-reduction could be measured), to give them more time available for their less routine tasks, "the challenging, nonrecurring aspects of the work" (Ashkenas 1986: 222).

When information technology is used to automate tasks in accordance with the scientific management model, speed-up is a central goal. According to one evaluation of several computer installations to support higher level white-collar work, the benefits of speed-up

also have their costs: "All departments believed that computers had increased productivity, primarily because they enabled people to do their work faster. Interviewees also cited rapid access to critical information, and faster reaction to price shifts, commodity scarcities, and other changes in the business environment. With the time saved, more data can be analyzed, more creative inquiries pursued, better decisions made, and more reports drafted....However, one user...felt that greater speed led to poorer quality work because managers could pressure employees for more and faster -- but perhaps less thoughtful -- work. Another view was that analysts were not as productive as they could be because of time they spend on data management instead of analysis" (Bikson, Stasz, Mankin 1985: 45). Time alone is not a reliable clue, then, to productivity, work quality, or job satisfaction.

The Office Imperative

Employees whose jobs are field-based tend to see themselves and to be regarded by their managers as anomalous to the dominant norm of continual office attendance and presence. They do not, as might be expected, work within a fully-developed cultural system that views positively the necessity for and conditions of their absence. Field-based workers regard themselves as being "privileged" at not "having" to be in the office all the time. They do not see this "privilege" as being a logical consequence of the fact that their assigned tasks could not be carried out any other way.

"Being in the office" can be a cultural imperative exceeding the bounds of common sense and functionality, the two cases presented here

suggest. As a cultural construct, "the office" seems to exert a metaphysical force which not only exceeds the ordinary social necessities of work and the in-person communication it requires. As one habitual form of social control, it may also be inhibiting the productivity of highest-cost white collar workers under modern conditions.

Case A Internal Revenue Service Field Agents

One group of six Special Agents in the Criminal Investigation Division of the Internal Revenue Service at the New York Regional Office were participants in an experimental program in which they received portable Grid computers, a phone line, modem, and furnishings for a home office. The experiment had two purposes: to intensify the use of computers in their work and to improve "the quality and efficiency of their work efforts as well as substantially reducing the most non-productive part of their workday -- time spent travelling." In this New York regional office of the IRS in lower Manhattan, one of two in the city, there are a total of about 150 special agents, organized into groups of about 12, each with its own manager. I interviewed agents who were and were not in this experimental program.

Special agents conduct investigations of cases where tax fraud in one form or another is suspected. To develop their cases to the point where a decision at a higher-level can be made as to whether they are prosecutable, agents trace out networks of financial transactions, as the basis of their findings of taxpayer intent. They use accounting spreadsheets to document phone records, bank deposits, and checks, as well as interviews with the taxpayer and with third parties who might have pertinent information. Their final product is a Special Agent's Report, taking anywhere from one week to one month to write; it is reviewed for prosecution actions by lawyers outside of IRS and by Treasury Department counsel.

Agents are empowered to execute search warrants signed by a court and to serve IRS administrative summonses for records. They can conduct surveillance. A college degree and 15 accounting credits are job requirements, as is the ability to shoot straight -- these Treasury agents (T-men) are armed accountants.

Agents have to be out in the field either to interview witnesses or to gather "tons and tons" of records. Except for those in the experiment who take the records home, agents bring these into the regional office and enter them

manually onto spreadsheets; sometimes they'll set up shop in the field (at a bank, for example). Doing check spreads is the most tedious part of the work -- "it's not the agent's real work. Analyzing the patterns is the real work." Despite the enormous numbers of entries that the development of a case requires, these are still done manually, with pencil, eraser, and 10-key calculator, in this regional office. Few agents had been trained to use the Zylog computer at the time of my research; clerical staff use it mostly for word processing and transcribing dictation.

Agents work on two kinds of cases: administrative cases, which they develop themselves or take as assignments from their managers, and grand jury cases, which are under the direction of the U S Assistant Attorney. About 20 per cent of cases come from exam auditors, others from projects that the Criminal Investigation Division has undertaken, others from anonymous informants, and others from information special agents pick up in the field. Only if it's especially complex is a case is assigned on a team basis. Otherwise, each agent works individually (except that when interviewing a witness of the opposite sex, a partner of either sex is brought along). When on grand jury cases, they're assigned to the same courthouse location as the Assistant US attorney's office where they also interview witnesses and analyze records.

Agents personally enjoy the greater autonomy of administrative cases, but they are willing to trade it for the prestige and impact of grand jury cases dealing with "big money," given that the mission of the Criminal Investigation Division is to punish and publicize tax evasion. Agents are not generally under day to day supervision: "I'm more of a free agent, more professional, and I don't have to account for 8 hours every day." Every one I spoke to felt lucky to be in a job that didn't tie them down to a desk in an office. "Fieldwork is less boring, tedious, regimented, and production-oriented than auditing. Every case is like a puzzle." They were happy with their work and sad about the commuting and travelling hassles of the metropolitan region. Cartoons about commuting were the only decorations in the (open-plan) office. "The hardest part of this job is getting to and from work." Commuting times range from no less than one hour to three hours daily.

Except for the experimental group, work is not to be done at home; writing the Special Agents Report at home is infrequently allowed, and then only for the most senior agents. Agents might write up a memo of an interview at home, but after hours. The rule is so well-established that agents don't even ask to work at home. Yet complaints about the distractions of the open plan office abound. By

government rules, home is considered an "alternative work site," by comparison with a "posted duty" in which agents work in an officially established office setting remote from a central office -- for example, a permanently established posted duty station on Staten Island is staffed by two agents who report via phone to their manager in the Manhattan office; he may occasionally come out to visit.

I interviewed the 6 then-members of this "computerized Grid group" and the group's manager, and as well, heard from 6 who had not volunteered for it, 3 who volunteered but weren't chosen, 1 group manager of a noncomputerized group, and the branch chief. The group's members except one were all senior agents with long service -- 10 to 17 years -- who had reached the top of their grade (GS-13). The one newcomer, with about three years service, was a woman getting a master's degree in accounting who had previously been a revenue agent.

The typical agent routine is to sign in in the office between 8:30 and 9 a.m., do administrative paperwork, and then leave for the field, after filing with the group manager a list of "stops" (interviews with witnesses, assembling bank or phone records, etc.). "If he or she is smart, the agent will schedule the last stop of the day close to home." That stop has to be planned because the agent has to enter it personally into the office sign-out sheet. If an agent schedules a morning stop directly from home, that also has to be entered the day before. An agent might occasionally call in in the morning, instead of coming in and signing in, but it is definitely discouraged. "They really don't want you working at home. Either you went on a stop or you came in here. You had to do one or the other in the morning. So you either sign direct [in person] or signed when you were leaving the day before direct to a field stop." Says a veteran manager, "If their first field stop takes them past the lower Manhattan office anyway, then they should come in to the office before going to it." The general rule is, then, that agents have to be in the office either morning or evening. Only when assigned to a grand jury case may they regularly call in; in Manhattan the two offices are nearby and so agents tend to come into the central office daily.

Whether agents can be trusted not to cheat on their hours is a managerial issue. The suspicions are that agents will go home early, get a late start, or not keep their schedule full enough during the day. The branch chief is pragmatic: "So what if he beats me for a few hours -- I know by the quality of his report whether he's doing the job." When suspicious, a manager will ask an agent to detail his/her time: "where were you yesterday, where will you be tomorrow, what do you have on today?" If there's cause for more serious concern, the manager will set in motion the

> documentation required for reprimand or worse, via the IRS Labor Relations Department.
>
> The experimental Grid group agents sign in at home via the Zylog, and for the duration of this test, they're keeping detailed time logs of each activity. Unless they've connected themselves into the office Zylog, there is no way of monitoring their use of the Grid. They bring all records home, but they are not using the computer at field stops. One person in the Grid group now comes into the office once every two weeks (on pay day), and those not on grand jury assignments come in about once a week.
>
> Between November 1984 and June 1985 (the last report I have), agents saved about 16,500 business-related miles (excluding commuting) by working from home, calculated to add up to about 830 staff hours. Data input time saved was about 33 percent, and editing time saved was 50 percent. The greatest time saving by converting from manual to computer was for the calculation task -- 52 per cent. During 1986, agents spent about 35 percent of their time at their alternate work site, at home; about one-third in the field; and less than one-fifth of their time in the office. About 25 percent of their "regular work" time was spent on the computer.

There seem to be three separable issues here: having a computer to use at all is the first; having one to use at home and in the field is the second; and starting the working day without having signed in or out in person at the office is the third. For the first, it seems obvious that whether portable or stationary, computers are ideal for the repetitive and analytic aspects of this work. For the second, having a portable computer could make sense for cases when inputting spreadsheets in the field (despite the fact that most agents in the test group were not so using it). For the third, and most important for this discussion, with or without a computer, it is clearly possible for agents to do their work without having to sign in personally at a central office every day of the week. Once a week appears to suffice for tracking their administrative paperwork through the clerical support staff and to get required signatures. Group

meetings are scheduled in advance and, given the individualistic nature of the work, in any case held infrequently.

The portable computer and the home-office furnishings supplied in this test I see as being legitimizing devices for carrying out at home work which is in any case minimally dependent on anything else going on in a central office setting. The mission of this bureaucracy can only be carried out outside of a central office. The "in-person" requirements encode "the office imperative," a conception reflecting a managerial understanding of field work as being merely an anomalous form of office-bound work, which is the ideal. In parallel to that conception is agents' conception of their having been "given" independence and trust, for which they are grateful. Yet there is no other way for this work to be done.

> Case B Information Technology Consultants
> In a consulting organization of about 200 people, the Management Information Systems (MIS) consulting group employs about 30 people. Six members of this group participated in a discussion of their work habits. To do the work for which they are employed, these employees are not expected to be in the office all the time. All agreed that as consultants they wouldn't make much use of an office-home option because their work is highly interactive on client sites and their deliverables are not usually reports. They do write monthly reports for their employer, which take only one or two days. But they also saw organizational impediments: "I guess I'm just not convinced that it will ever happen where you can spend two days per week at home working."
>
> They could, they agreed, work at home a couple of times a month, "especially if we had the technology to support it, and without doing any sort of policy thing." Their organization does not have an integrated voice-mail, electronic-mail, and word processing system, although these are the same sorts of systems they advise clients to install. Some have modems at home they've never tried to hook up to the office. Nevertheless, they could describe the advantages of working late at home and sending in a report to their secretary electronically instead of "having to get up early and come in."

> "Firm policy says we have to be here from 8:30 to 5:30 -- but consultants have a different level of flexibility." And then everybody laughed. After that, about an hour and a half into the discussion, one person added: "I think it's important to note that we take a daily census here -- are you going to be in the office tomorrow, where will you be, what site are you going to be at. The census is about 70% accurate."
>
> I asked whether they saw any difference between themselves, who have the flexibility entailed in working out of a central office, and employees who don't. Yes, they cherish it, and see it as a "big responsibility." Then, one person said: "If you've just put in 140 hours in the last two weeks, you can take the next Monday and work at home, and you'd probably get away with that." Others chimed in skeptically, "You wonder sometimes," and then someone said with a chuckle, "Even then you wonder....[to his colleague], You've inspired us to work 140 hours." Continuing in a defensive tone, he added "It's mental health. We've had all this burst of activity, and so now I can, you know well, this is one way that I can sort of make up for that. And that's real valuable. Because if we didn't have it, there'd be hell to pay." That elicited uncomfortable laughter all around, and they exchanged the looks of truant schoolchildren.

Working at home is, then, an uncomfortable idea on organizational grounds: a high degree of compliance with an office tracking system, whatever else it represents functionally, suggests that consultants' absences are regarded as being anomalous to the norm of office presence, not as the essential component of doing the work which they are employed to do. The nervous laughter and teasing point to discomfort at breaking a fundamental organizational taboo. Having a greater degree of locational freedom than office-bound employees they see as a reward as well as being a "big responsibility." Yet like IRS special agents, they could not possibly be fulfilling their organization's mission in any other way. Being in the field at all seems, then, to be regarded as being out in left field.

The location even of overtime work is additional evidence of the

strength of the office imperative. When professional-level employees "work at home on an informal basis, they tended to augment work at their conventional offices, not substitute for it." This study, based on an electronic survey of computer users in New Jersey, Illinois, and Colorado, found that about 50 percent of those working a full work week in the office also worked at home. "Although some employees substituted work at home for work in the office on an hour by hour basis, others added time in the office whenever they worked at home. Overall, the more time people spend working at home the more time they also spend working in the office (or vice versa)." For tasks requiring high levels of concentration, respondents "also believed that their jobs would allow them to work 18 hours per week at home on average"" (Kraut 1987: 121). "In 1983, IBM paid for telephone line, modem, and terminal costs for over 8000 professionals who worked at home. Company guidelines stated, however, that the home work was not in lieu of work during regular hours at a company location. According to official company policy, these employees could work as much as they wanted at home as long as they put in a standard work week in the office" (Kraut 1985: 9). Of about 1000 replies to a questionnaire sent to readers of Datamation, all of whom had computer equipment at home, only 9.9 worked at home as "a regular substitute for work at another location," 12.4 occasionally substituted for work elsewhere, and 64.5 were working at home "in addition to regular work hours" (Olson 1985: 129, 130).

The City of Fort Collins, Colorado has a policy "which allows managers and department heads to investigate, plan, and implement active telecommuting programs for selected and qualified employees."

Employees could volunteer if they meet certain criteria: not being continuously involved in team projects "unless the projects are such that time with the team can be efficiently scheduled," not new employees, and not employees who already give evidence that they are "difficult to motivate at work" (Miklos 1986: 7). Although the program is not restricted to those working in information services and although the alternative work site pattern is fully supported with appropriate technology, as of this writing, only 3 percent of the total city workforce participates. That is not an isolated pattern: only "90 programmers, analysts, engineers, marketing planners, project managers, external affairs, managers, and forecasters were working at remote sites or at their homes throughout California" — out of Pacific Bell's more than 19,000 employees in those categories, under a fully-supported program (Bureau of National Affairs 1986: 74, 75).

A telephone survey of knowledgable individuals in 48 of the 50 largest employers in Pittsburgh, Pennsylvania (which houses "the country's third largest group of corporate headquarters") found that 52 percent or 25 firms had some type of "telecommuting" program, but all of them are solely on an "after-work" basis. In one of the two firms with written "telecommuting" policies, which apply only to "management/professionals," the following stipulation appears: "The company has the right to audit in the telcommuting employees' homes. This is to make sure that the employee is using the equipment only for work; it is also to make sure that the equipment is corporate issue" (Hughson and Goodman 1986: 317). These extra hours of work "enhance" productivity, but, hardly surprisingly, primarily because "after-hours telecommuters are working more hours for the same pay" (ibid.: 319).

The office imperative can be turned to many uses.

Conclusion
Place-Time Coordinates of Industrial Discipline

Both public and private employees seem to be caught up in historical, now habitual, understandings that work is only legitimated by the administrative powers located in both the physical settings of offices and the times of their operation. These have become what they are the symbol of: this belief, like beliefs about sacred space, is that the physical and social setting itself sustains these powers over occupants. This belief is one thing, its capacity for obliterating practical alternatives is another.

The very idea of self-scheduling and of working away from a central office furthermore suggests the prerogative of putting social distance between oneself and important others. Because remoteness itself signifies authority, prestige, and status, that prerogative is culturally inappropriate for those not actually having those attributes, no matter how functional the arrangement may be. Not only fearing that they will lose control over the work of their home-working subordinates, managers may also be fearing this loss of symbolic deference to their authority. Managing employees at branch, regional, or satellite offices can reflect this same cultural tension, usually resolved by amplifying and exaggerating the aristocratic power and prestige of "headquarters," which is, reciprocally, a subtle form of degradation.

Yet, in mediating physical distance, high-tech tools may also mediate organizational distance and enlarge employees' organizational

involvement. Professional level workers often value their social distance -- the tradition of R&D reservations and skunk works, for example, reflects that interest. Lawyers in six legal service programs found their work changing in three ways after computers were made integral to their work: legal decision-making (the prerogative of the professional) becomes more explicit and at the same time "augments and amplifies creative legal judgment"; lawyers become more "self-managing" through a "more accurate data base and monthly feedback processes," which represent a "'vertical'" integration" of their job; and the organization has been able to improve its intake and screening processes (Hirschhorn and Farquhar 1985: 251). What lawyers can lose by being brought more centrally into the organization, however, is the unique sense of professional identity, which their organizational distancing reinforced. But they might "regain" their "ground by helping to shape specific organizational practices" (ibid.: 263).

The little I have been able to say about professional level work processes per se points to a large gap in the research literature. A good place to begin might be with the same kinds of questions that Mintzberg asked in his study, The Nature of Managerial Work. These could be asked again about all professional level work, but now with respect to computer use and the temporal and spatial implications of all professional level tasks:

> What kinds of activities does the manager perform? What kinds of information does he process? With whom must he work? Where? How frequently?
>
> What are the distinguishing characteristics of managerial work? What is of interest about the media the manager uses, the activities he prefers to engage in, the flow of these activities during the workday, his use of time, the pressures of the job?

> What basic roles can be inferred from a study of the manager's activities? What roles does the manager perform in moving information, in making decisions, in dealing with people?
>
> What variations exist among managerial jobs? To what extent can basic differences be attributed to the situation, the incumbent, the job, the organization, and the environment?
>
> To what extent is management a science? To what extent is the manager's work programmed (that is, repetitive, systematic, and predictable)? To what extent is it programmable? To what extent can the management scientist "reprogram" managerial work? (Mintzburg [1973] 1980: 3).

It is a mistake to think that the literature on R&D workers and work processes can stand as prototypes for all professional and technical work (Bailyn 1985: 131). Those studies tend to concentrate on "individual characteristics...such as need for self-actualization ....[and this] individual level approach is seldom integrated into questions concerning ways to bring technological development to all company functions....One reason for the 'R&D bias' may be that technical experts in R&D come closer to the prevailing assumptions [about] individual professional characteristics than salaried technical specialists in other company functions and thus, they are studied as a 'prototype' of a technical professional in industrial organizations" (Gerpott and Domsch 1985: 209). Much more work is needed to question such assumptions and the prevailing prototypes about autonomy and productivity they give rise to.

PART 3

INVISIBLE RUNGS:

PLACE-TIME DIMENSIONS OF WORK EVALUATION AND CAREER

Modern organizations exercise control over work place and time to assure the efficiency and productivity of continuity. Management has been regarding alternative work sites, schedules, or employment arrangements (such as part-time work or job sharing) less as opportunities than as disruptions to established procedures and expectations. The same information technologies which organizations have come to rely on will themselves continue to accelerate awareness of such options. High-tech tools are a Trojan horse delivering the feasibility of a different future.

Employees, however, remain as much habituated to this industrial discipline as do employers. Even when they may work at home for part of the week, many professional, technical, and managerial employees will not, even when their work is suited to such a pattern. Why? If they are not putting in a predictable daily appearance and being seen by bosses and colleagues every day, they feel that their careers are at risk. The less they are seen around the office, the lower their chances for acknowledgement and advancement -- so both they and their bosses believe. Moreover, for managers, the fewer people around to supervise, the less visible is their power and prestige.

Physical presence and the appearances of working remain at the center of managerial ideas about managing, and together, these are one of several invisible rungs on career ladders. Keeping an eye on engineers bent over drafting tables is for one manager his idea of "supervision," but he is at a loss, he says, about how to supervise

engineers sitting at screens using light pencils. Employees' who participate in electronic conferences on technical and professional topics experience a new freedom in being evaluated more for their contributions than for their personal styles or attributes, which can be so decisive in group dynamics. To what extent appearances and productivity are causally related is a new, now unavoidable question.

Another is the nature of the relationship between the nonroutine character of professional level work and the most reliable means of assessing its contribution -- should these be based on input or output indicators? Although clerical employees certainly encounter and handle unpredictable and nonroutinized tasks, their work is customarily designed to avoid those as much as possible, and as a result, their ouputs are more readily measured. Professional level employees are expected to deal with a much higher proportion of nonroutine tasks.

> Nonroutine office work primarily involves managing unstructured or semistructured problems. [It] is characterized by plausible but general information inputs, variable detail, extended and unfixed time horizons, internal and external data, and diffuse or general scope. Such work rarely proceeds through a sequential conversion process. Instead, the less structured nature of problems may frequently require abandoning stepwise progression. Often, multiple objectives must be balanced through time, which further undermines strictly linear progression" (Pava 1983: 130).

The one clear conclusion to be drawn from discussions of methods for estimating professional level productivity is how murky they are. Or, when clearly based on industrial engineering principles, how inappropriate they can be. Although these measures are or should be somehow different from those used to describe production processes objectively, satisfactory quantitative output measures continue to be

elusive (Ruch 1982: 11). As a result, some recommend the tactic of analyzing subjective judgments of managers on the important components of organizational productivity and output (Packer 1983; Ruch 1982).

In the absence of developed methods and managerial confidence, input measures continue to be the safest for managers who have to report up the line in strictly cost-effectiveness terms. These input measures are no different for professional level workers than for any others: hours worked (first and foremost), presence, punctuality, and tangible work results whose value can be directly monetized, preferably within a quarterly time frame. Those are measures, however, that may satisfy only those in an organizational hierarchy far from the actual work processes involved.

Presence, Visibility, and Promotion

One of the first questions managers of higher level white collar employees ask themselves when discussing an office-home work pattern of two days per week is, "How can I supervise people when I can't see them?" Employees ask themselves, "How can I be sure that I won't miss out on a promotion?" The career evaluation system appears to be based as much on presence and proximity as on work products.

Both managers' and employees' concerns with "invisibility" can be read in contrasting ways. On the one hand, they may express the belief that there is a regularized system of appraisal in which "invisibility" in and of itself counts as a negative. On the other, it may express the belief that evaluation is so personalistic that the employee who is "out of sight" is, for her supervisor, "out of mind." One study finds that as employees ascend in a hierarchy, both criteria

for evaluation and job requirements are increasingly vague; the signals relied on for further advancement may then consist of sex, race, social background, family status (Baron 1984: 55-56) -- and presence.

The temporal phase of a person's career may therefore be more likely to influence the importance of presence than any one rule of thumb. In early stages, employees are likely to succeed both via personal and professional attributes and by passing various formal and informal tests. Contact with the immediate supervisor can be decisive; peer groups are also important for both training and socialization. Office presence is likely to have a higher priority. In the next phase, employees begin to search for mentors and to intensify a network of organizational and extra-organizational contacts. As they grow older and family obligations multiply, they are simultaneously seeking job security and increased income. By then, a successful employee has become more committed to a specific organization or profession, and may even be the sole incumbent of a particular job description (after Baron 1984: 57, 58).

In the middle and later stages, as employees have become increasingly committed and loyal to the organization and as managers have learned who they can best trust, the office-home alternative is more likely to be exercised. That is one way of interpreting the preference of male employees 40-50 for flexible work hours. Male professionals also predominate in having flextime arrangements, which suggests that gender has significantly different effects on the career implications of continuous visibility: are women less confident that they can remain out of sight or that they can deviate from

organizational norms?

Yet managers can distrust even proven high performers out of their sight. Nine professional level employees in a large corporation were chosen on the basis of their past performance to work either at distant locations or at home three days each week. They found that reporting relationships became more formalized, and "most felt that they were supervised more" (Olson 1982: 83). Moreover, they felt that management would have a stronger reaction if they were missing deadlines "than there would be if management could observe the everyday problems and distractions in the office that contributed to delays and missed deadlines" (ibid.) When telecommuting programs are instituted, management consultants and the how-to literature consistently recommend that professional level employees working at home should be producing clearly defined deliverables.

Flexible and personalistic administrative procedures predominate in white-collar workplaces, by contrast to the rigid criteria in blue-collar employment systems, according to models of the "salaried" and "industrial" employment relationship developed by Paul Osterman (1987). The flexibility expresses a firm's greater commitment to white-collar workers' employment security: when job descriptions have no legal or customary force and employees are willing to change their jobs on demand, the firm can weather unforeseen circumstances and keep employees on. Job ladders are unlikely to be clearly defined, and seeking continuous employment, employees consent to a relatively ambiguous career path. Although there is greater scope for reward by merit, salaries are more likely to be based on personalistic considerations.

Once past a probationary period, ideally employees can expect lifetime employment; the implicit promise of management in the salaried system is that there either will be no layoffs or every effort will be made to avoid them. "What is crucial is that employees are sufficiently convinced of the firm's commitment to employment stabilization that they are willing to provide the degree of flexibility [in taking assignments] that [constitutes] the firm's reward" (ibid.: 13). Socialization and training inculcate the firm's objectives, and by its cultivation of loyalty, the firm guarantees internal predictability. Through the career opportunities which training creates, the firm maintains workforce stability (after Osterman 1987: Chapters 4 and 5).

Critical to this model of salaried work, then, are the employee's loyalty and the organization's commitment. Although space-time dimensions singularly influence this model in several ways, the relationship between office presence and absence and the operations of internal labor markets and the nature of careers has not yet been explored. The systematic alternation of employee visibility and invisibility, presence and absence, and location at center and periphery nevertheless pervades career rites of passage. Employees' invisibility can be a sign of their progression and deepening loyalty, for example: they may be away from a central office as representatives or agents of the organization, to take training, or on temporary assignment to branch or overseas offices. Or, as a sign of their career stasis, they may never travel or be banished to outposts. Employees logically worry when they are "out of mind" because managers, they know, tend to rely on the physical signals of sex, age,

and race, for example. These visible cues include not only presence, but punctuality and sitting at a desk as well. In this "signalling theory of promotion," when ability is difficult to assess, as it often is, managers assess it indirectly: office presence should be added as being another prominent signal.

A marketing specialist in a civil engineering firm analyzed the relationship between presence and output:

> As far as not trusting employees working at home, I suspect that in order for an office-home pattern to happen, the measure of an employees' performance, the yardstick, if you will, has to be changed from the wayit is now. Right now a manager can tell if you're busy because you're sitting there and you look busy. Whereas, like Alice said, you might be at home doing your laundry. I suspect that what we need to do is change that yardstick to a task assigned and a product received. The amount of time in between a manager doesn't really have a handle on, but if it's more than what you'd like or it's less than what you'd like, next time you might give that employee twice as much to do. I think the measure needs to be changed.

Personal attributes and presence combine with corporate "opportunity myths," which are based on individualistic rather than structural understandings of the corporate career system, as identified in James Rosenbaum's studies of 15 years of personnel records in one large corporation (Rosenbaum 1984). Rosenbaum credits employees' progression to their initial job, a selection process which "defines their options irreversibly" (ibid.: 177, 296-297). In his "tournament model" of career systems, selection practices "declare

some [employees] winners, who then compete for the next higher level. People who lose a competition cannot compete with winners, since it is inefficient to allow losers -- who have been declared less able -- to occupy the time and attention of supervisors and the challenging positions on primary career ladders....While losing is permanent, winning is tentative -- subject to later competitions. However, each win is an important statement about ability: It says that each winner has more ability than all losers at that stage of the tournament. In contrast with 'round-robin' models in which cumulative win-loss records define one's standing and each victory adds only a small increment to their records...tournaments make each victory carry additional symbolic meaning. A victory connotes ability above <u>all losers</u> at that stage -- including people one has never faced in competition....While the human capital model implies that selections may be reversed (e.g., if an individual makes added self-investments), the tournament suggests that losses are irreversible, negative signals have a lasting stigma, and the absence of company investments cannot be easily made up later. Contrary to the individualistic ideal, where the hero of a Horatio-Alger story picks himself up, dusts himself off, and redeems himself after a loss, tournaments don't permit second chances for the top prizes" (Rosenbaum 1987: 8-9).

Interviews with promotion committee members reveal that when comparing candidates with equally high supervisor ratings and in the absence of sufficient information about employees' abilities, members' decisions are likely to be affected by such signals as educational credentials, prestige of the school, race, sex, and physical appearance. Past attainments and "career velocity" are also read as

signals for ability. Age is especially significant: while supervisors' performance ratings tend to decline with employees' increasing age, employees' productivity, measured objectively, tends to increase. Because "age is such a strong negative signal...it negatively distorts supervisors' ratings" (ibid.: 6).

Keeping the opportunity myth alive is employee ignorance or misperception of the structural effects of age. In interviews with about 160 men and women on the two lowest levels of management, Rosenbaum finds a surprisingly large degree of misperception and denial of age barriers, compared with patterns revealed by personnel records. The denial declines regularly with age: younger people still think wishfully, in the absence of structural information about the relationship between their careers and the timetables of corporate "tournaments." Lacking this information, which firms themselves do not develop, employees are at a handicap in targeting individual efforts (ibid.: 19).

Two information systems specialists who work for a large international consulting firm are unclear about the grounds on which their advancement depends:

> "The question is, is there any rhyme or reason as to how you're evaluated? I mean, when I get ready for my review, I write up a big, long memo and it says I've worked on the following cases and I played these roles and the cases were successful or not, and they were brought within budget or not, and the client liked us or not, and I wrote these magazine articles and gave these speeches. And that's basically what I think people are evaluating me on. It's always unclear whether it's done." Do you know if that information is cross-checked with, people that you work with? "Rarely. Rarely. Because I've checked up on it. Rarely."
>
> "My tenure here has been pretty short and I have not had a review yet, but my comment is: I have not one clue as to how the review process takes place, what I'm supposed to

> prepare in advance, on what I'm being evaluated, what peformance means, and so the answer to your question is, that's not well communicated. Nor has anyone communicated to me the fact that, gee, it's just as well to work at home or not work at home, or do what you want or don't do what you want, whatever. All that is just something you kind of put your antennae up and you listen around and take a reading, but that's never been told to me."

Two hypotheses about the significance of office presence emerge. On the one hand, structural indicators are so influential that presence may not figure at all in advancement. On the other, in light of both the "opportunity myth" and the office imperative, absence may be read as a negative signal as strong as age, for example, and no less structural. On-site, the psychological contract is visibly acted on and reinforced; off-site, managers have to rely on employees' internalized loyalty and commitment, which, within the symbolic system of the office, distance is assumed to attenuate. Working at client sites, for example, consultants are more visible in their job market, and poaching can add to already considerable turnover costs for consulting firms in a tight labor market. But it appears to go both ways: one systems developer employed in a large financial services firm exclaimed that her organizational loyalty would intensify if she had the option of an office-home pattern. Levels of employee loyalty and organizational commitment are not, therefore, associated only with financial and career incentives: physical location should be counted as another important dimension.

In one firm of internationally active consultants, its employees' job security depends on the work available, and to maintain their visibility in this market, consultants feel that, because of their heavy travel schedules, they have to be on site in order to keep

getting assignments. This "constrains, to a degree, the flexibility they would otherwise have concerning work space and time. It is this 'network support' function of the office which leads to a curious situation I call the 'Office Paradox." Many people...have a love-hate relationship with the office. They want to go there because it is the only way to stay in touch...yet that very dynamic leads to so many interruptions that it is difficult to do other work. It is therefore difficult to feel that office time is 'productive' in the usual sense because, as one consultant said, network building and maintenance is an important part of the job, but leaves one nothing 'physical' to show for it" (Violante 1987: 69-70). Intangibility characterizes much of the work of professional and technical employees -- a fact which presence, pure and simple, does nothing to change.

Overtime at Office and Home

Few professional level jobs are 40-hour per week jobs. Overtime work by higher level workers is an expression of the degree of work involvement and organizational loyalty in the today's model of the ideal career and its time coercions (Rosenbaum 1987: 7; Bailyn 1980). This metric figures importantly in the operations of the internal labor market by influencing decisions about who gets what jobs next and for what reasons. It particular influences the career patterns that women can expect to have. In innovative industries, such as those in Silicon Valley, for example, there is a "paucity of women in significant positions....It becomes clear that women do not automatically do better in high participation environments unless there is also significant support for the additional responsibilities

they bring with them" (Kanter 1986: 534).

Interviews with about 140 women at senior executive levels reveal that the "idea that long hours are a requirement of success" was "the single most controversial issue....At our seminars, it produces the most discussion, resistance, and even anger. People don't want to think that they have to work seventy-plus hours a week to achieve no-holds-barred success [but] high level success will remain elusive without working long, hard hours" (Gardenswartz and Rowe 1987: 62). Are they working overtime because they have that much more work to do, or because they get less done during normal hours? Paradoxically, moreover, there appear to be few if any organizational doubts about employee invisibility when it comes to overtime, whether people work late alone at the office or work early in the morning or late at night at home. I suggest in Part 4 why this paradox exists.

Of all aspects of the relationship between home and work, long hours have the most reverberations and for more people than are usually counted in -- spouse, companions, children, friends, community. Much overtime work is not done in the office, but on long stretches of travel time. No one is more present than the absent person: the work-home boundary keeps being actively violated by the prevalence of overtime and travel.

Personal vs. Company Time for Computer Training

Organizational investments in information technology for professional level use outside of R&D and information systems environments are often made reluctantly, and once made, the time needed for training is more likely than not to be left to employees' personal time before and

after work or during lunch hours. Employees who are provided with computers often comment that their workloads are so demanding that they lack the time to explore applications possibilities by which they might work more productively. In large organizations, the cost of personal computers has sometimes also been left to employees. Only after computer brand confusion sets in do organizations finally develop a standardized purchasing program (Carroll and Perin 1988).

The management information systems consulting groups interviewed for this study exemplify the "cobbler's children" dilemma: both are recommending networked electronic and voice mail systems to clients, and both companies lag in using these technologies themselves. One firm has a "central data repository for short job descriptions of all the jobs we've done" that "nobody ever puts data into." Networking to tie together the national system of offices of one firm is not financially feasible, because each is its own cost-center. This firm sells a unique piece of software, which its own consultants have had to learn to use on personal time:

> "When we developed this, we put millions of dollars into it so that we could go out and get more clients to show them we are on the leading edge of technology. We spent hours and hours in the Washington office figuring out how we could get around sending our people to courses on it. Some were saying that we should train them in-house after hours and on weekends because we couldn't afford the cost of training them. The rest of us were saying that we can't afford the cost not to train people."

Investments in equipment and allocation of time for training, being decided on short-term grounds, are not likely to be made at all.

> "It's just as real a cost to spend $100,000 wiring this building for a network to can connect systems together as it is taking everybody off-line and sending them to a course for three weeks to learn how to use the system. Those are three weeks that could be billable to client projects. And that's a lot of time."

In another firm, although many members of the professional staff are scanning new technology developments on behalf of clients, no one is performing a similar function for the firm itself (Violante 1987: 37). Outside of research and systems development environments, there appears to be little relationship between strategic planning for business development and high tech tools and training for higher-level employee (Carroll and Perin 1988).

> "I work with a partner out of Charlotte, and we set him up for voice mail. I just can't get him to use it, and I can't tell him to to because he's senior to me. But when I do get him to use it, it's going to be wonderful. We've been trying to contact each other for two days."

Home-Bound Professional Level Employees

Some people with professional level skills can be employed only if they can work at an alternative work site. Networked information technologies appear to hold much promise not only for people who are themselves disabled, but for those responsible for the care of others and limited in their geographic mobility. Whether their disability further disables them within their firm's employment system is an important concern of one computer programming specialist, employed by a large insurance company, who has been working from home for about 18 months:

> "...the telecommuter must believe that the work given to him/her corresponds to what is being given to other employees working in the office. This is the trust that one is not being taken advantage of nor slighted simply because of physical absence" (Holt 1987).

The same tools may also be as socially enabling for the disabled as they can be for others' who hope to be judged strictly on the merits of their work. When using a computer conferencing system, "the

social salience" of any disability, being invisible to others, is reduced (Hiltz and Turoff 1978: 173). A White House Conference on Computers and the Handicapped in 1984 dealt with issues of equipment accessibility such as keyboard emulators and speaking terminals; companies are eligible for federal tax deductions on the costs of special equipment (Burnett and Neimark 1985).

Self-Management, Autonomy, Innovation, and Productivity

When high levels of self-management and self-scheduling exist, employees are likely to be acting on the logics of the work itself. The reasons why 30 percent of professional level workers are on flextime, compared to the average of 12 percent of the total workforce, may have less to do with status perks and prerogatives and more to do with the space-time dimensions of their work itself, its phases and stages and its oscillations between solo and social requirements. Given the standardization of space-time norms and conventions on the one hand and the space-time dimensions of professional level work processes on the other, misfits are apparent. They are being addressed only incipiently: the fact that only two-and-a-half times as many professional level workers are on flextime as those in the general population suggests a weak attempt at recognizing the affinities between daily schedules and work processes.

Some firms do recognize these affinities, yet call flexibility a "benefit," as a way of recruiting more competitively and lowering turnover costs. But the fact is that only 30 per cent of professional level workers now have schedule flexibility, and some proportion of those are computer specialists already acculturated to or demanding

nonstandard work times. (I discuss high-tech professionals in more detail in Part 4.)

The misfits tell an ironic story. Although professional level employees are likely to represent the highest labor cost precisely because they are expected to contribute judgment and creativity to an enterprise, they are as little trusted to use place and time options in managing their work processes as are employees who are paid less presumably because they need to be supervised more. When professional level workers are self-managing, they are "privileged," "trusted," "rewarded," "autonomous," qualities for which they are presumably being compensated in the first place.

Autonomy remains a vexed subject, especially because while it may be a quality that individuals exercise, work is inherently social; autonomy appears to oppose cooperation and creates a contradiction in terms. A study of 30 Ph.D. scientists in R&D labs found that only five had a sense of autonomy as meaning that they should not be regarded as being in a social setting and "subject to organizational controls of various kinds....It does not seem to be the case...that the main issue facing technical specialists in industrial organizations is a conflict between the need for autonomy and bureaucratic control....I would locate the main issue, rather, in a misunderstanding of the meaning of autonomy in the industrial research career. This misunderstanding stems from the assumption that R&D employees fit the traditional mold of the academic scientist" (Bailyn 1985: 130-131). Most of these scientists were offered "strategic autonomy," which allowed them to define problems and set goals, and then deprived of "operational autonomy," by which they could control

the means of implementation and procedures problem-solving (ibid.).

An effort to offer operational autonomy within the research department of the Federal Reserve Bank of Atlanta ultimately came to naught, but the innovative approach suggests important principles. In early 1981, Donald L. Koch, then senior vice president and director of the Atlanta Fed's research department, inaugurated a "new style of management" which included "effective use of computer technology," but added as well a new ethos of collegiality, accountability, and autonomy (Koch and Steinhauser 1983: 247). "Annually, each employee establishes a performance contract that is reviewed several times a year," within which employees "exercise unusual freedom to develop products within agreed overall goals. This is far from a laissez-faire proposition, however. Research manuscripts, for instance, must be relevant, literate, and oriented toward the future" (ibid.: 248). Employees were divided into eight teams, consisting of three economists, three research analysts, two clerical support workers, and two student interns.

Koch "bought 2000 hours" of employees' time and left them to "manage their freedom" (just about everyone on the nonclerical staff worked at home, with and without computers, for some of the time) (Personal communication). From late 1980 to early 1983, under this policy of paying for performance instead of for attendance, "productivity increased 920%" -- "measured by printed material delivered to our market" (Koch and Steinhauser 1983: 248). The department developed, among other things, a regional economic database "containing over 2,000 statistical series and updated monthly" (ibid.). When the Fed chairmanship changed, the program was

discontinued and Koch left to take a teaching post. Before that, however, several hundred interested managers, consultants, and scholars had come through to see the program, but Koch was never asked to put this idea "for leveraging the human mind" in place elsewhere.

That effort integrated autonomy into work processes by simultaneously stressing an ethos of both accountability and collegiality. By contrast, in an R&D environment in a large high tech firm, the main wall decoration around the open plan offices is the firm's fiscal or quarterly calendar: it gives the signal that intellectual process is necessarily product, to be evaluated with the same metrics and in the same time frame as production or marketing work processes having specific outcomes. Such confusion goes a long way in accounting for space-time rigidities. Because hours and presence can be measured, they become the salient input metric for assessing output and outcomes — for the quarterly report to shareholders. Putting it baldly and probably unfairly, work is product to those in strategic, administrative, and operational functions, and process to those closer to technical specialties.

But imposing controls external to the characteristics of the work itself is probably the dominant industrial habit. Only recently have organizational theorists been speaking to the role of self-standards and self-evaluation in "the aggregate control structure" of organizations. They find it has greater influence than generally acknowledged. For less routine tasks, for work done with "continous process" technology, for interdependent work, and for work in dynamic as opposed to stable environments, they suggest, self-control is more appropriate than external control (Manz,

Mossholder, Luthans 1987: 4, 19). In neglecting self-standards, wider societal implications of encouraging self-management are also neglected.

How employees themselves understand and experience autonomy is different from the "most commonly used measures [which] operationally confound job autonomy with a conceptually different job characteristic," that of "job interdependence" (Breaugh 1985: 552). Job autonomy has three "facets," according to empirical tests made with 97 employees working in supervisory, clerical, and editorial job classifications. Self-scheduling, and self-evaluation are the central elements which "have construct validity" (ibid.: 556):

> Work Method Autonomy. The degree of discretion/choice individuals have regarding the procedures (methods) they utilize in going about their work.
> Work Scheduling Autonomy. The extent to which workers feel they can control the scheduling/sequencing/timing of their work activities.
> Work Criteria Autonomy. The extent to which workers have the ability to modify or choose the criteria used for evaluating their performance (ibid.: 556).

Functional, political, and sociological differences among the various kinds of autonomy are one kind of question, and cultural or symbolic understandings of it are another. In a recent study of U S engineers, their freedom to leave their desks and move around the plant on "rounds" is taken to be an important indicator of their degree of autonomy, which this author defines as freedom "from the watching eyes of a supervisor."

> Unlike most manual workers and many white-collar workers who are posted at a station (a particular machine, a set of machines, a control room, a typewriter, or a sales desk), most of the engineers at Contronics and Precision Metals make rounds. Because their jobs involve the inspection of machinery and processes and regular meetings with other members of the organization....the engineers must be able to move freely through the plant and office areas....The organization of work

> into rounds ensures that the engineers exercise a wide range of discretion. It would be inefficient, often impossible, for a supervisor to accompany his subordinates through these daily rounds. Consequently, although the results of the work are often open to observation and inspection, the process by which these results are achieved is free from the watching eyes of a supervisor (Zussman 1985: 104-105).

This definition juxtaposes autonomy with work having little or none. The definition is not integrated into the nature of this work itself and the conditions its performance demands. The comparison here is with the authoritarian, oppressive employment relationship associated with the lock-step discipline of a Taylorized production line or, further back, with Bentham's Panopticon designed for incessant observation. Another study, this one of British engineers, is a product of the same discourse:

> Despite complaints about managerial interference in a number of Metalco's departments, one of the engineers' essential functions as trusted workers is to operate without the close minute by minute control that is imposed on many manual workers by the flow of the assembly line or direct supervision (Whalley 1986: 125).

Beneath their discourse on autonomy runs these authors' subtext of intergenerational mobility and the autonomy attainable only by higher status. These workers, they imply, have a greater degree of autonomy than their older relatives who were not in "trusted" work -- father and mother, siblings, uncles and aunts; or these workers were once themselves in manual occupations. The wider narrative from which that story is drawn is that of "industrial progress" or "modernization" which, differentially liberating people from work's imprisoning environments and fragmenting their work processes into mindless details, creates a (natural) status system.

While it gets the historical facts right, that seems to be far

too limited a story with which to describe the meanings of modern work processes to best-educated workers and to society. The discovery that professionals' tasks are often detailed, rote, and routine and that blue-collar tasks require workers to use their minds is news only in the terms of a discourse which confounds social status and work processes. But that is the discourse within which work is conceived:

> (It is anthropologically interesting that in our culture the phrase "manpower policy" or "manpower specialist" tells you immediately that we are talking about the low end of the labor market, low skills, low wages, low status. An "auto mechanic" is not automatically someone who works on 1968 Plymouths with 350,000 miles on the odometer. Subsidization of medical education is not described as "manpower policy.") (Solow 1987: 2).

Most importantly, in practice this discourse produces an irrational, counterproductive allocation of autonomy, discretion, and frequency of supervision: "Organizations allocate nonstatus rewards to jobs in ways that are related to job status....[J]obs are structured in organizations so that regardless of whether one wishes more variety, autonomy, challenge, or interpersonal influence in one's work, one can only get more of it by advancing in the status hierarchy" (Rosenbaum 1984: 8). Not only do professional work processes need private, quiet spaces, whether in the office or at home. Secretaries are now performing complex data base management tasks, for example, which require no less concentration and freedom from interruption than professionals' writing time.

Only when work processes are more clearly delineated are the logics of work design likely to replace the symbolic logic of status and its dysfunctional translations into space and time. As more is learned about higher level white-collar work processes, more will

become known about the lower level work processes supporting them. In the meantime, these cultural confusions very nearly obliterate concern with work processes and their consequences for autonomy, innovation, productivity, and the daily satisfactions of employees of all kinds. The ultimate and perhaps most credible source of workplace authority and discipline, for all levels of workers (as "participatory management" programs among blue-collar workers reveal), would seem to be their shared understandings of the logics of the design and organization of work itself.

A New Sociology in High-Tech Organizations

In high-tech organizations, a new sociology is emerging that appears to be markedly different from that of traditional organizations. Information systems units or R&D organizations within traditional industries, for example, are also likely to share its features. A pattern of difference is beginning to be revealed by scattered evidence along several dimensions: relative shifts in the occupational structure, differences in direct computer use in professional work processes, differences in the place-time habits of intensive computer users, a trend toward new types of employment arrangements, and an increase in computer-aided communication that is location independent.

1) The Bureau of Labor Statistics projects an increase in the number of professional level "computer specialists" of between 79 and 84 percent 1982-1995. The increase in accounting and auditing professionals, by contrast, ranges from 38 to 44 percent, and for economists, the BLS projects about a 30 percent increase. Among

clerical workers, the projected increase in "computer operator personnel" is between 25 and 30 per cent (U S Office of Technology Assessment 1985: 38). The size of this specialist group will begin to exert more influence on the organization's social shape.

2) Professional level workers who do and do not rely on direct computer use constitute increasingly distinctive status groups in terms of place-time habits and career paths. (Most information is, one way or another, computer-mediated or generated, and many who are not direct users may request others to prepare computer analyses, which they then use only in hard-copy form.) Direct computer use is little involved in the work and careers of professional level employees who are not in data management, systems development, computer science, natural and social science, and engineering. Even when aiming to provide professional and managerial level workers with computers for their direct use, organizations are more successful with lower level employees, partly because "'idiot-proof'" tools can inhibit professionals' use:

> Although over three-fourths of the organizations in our sample [of 26 organizations with 55 work groups and a total of 530 employees] aimed at providing [computer] support for higher management and professionals, they were most successful at supporting lower level employees (clerical, secretarial, and technical). Major efficiency gains are observed at that level...but they have little impact on overall costs or value-added improvements....We have not found evidence that having to learn how to use a system is aversive to higher level employees (even though quality training is difficult to deliver). Moreover, systems that are "idiot-proof" also are probably competency-proof, preventing well-educated employees from manipulating interactive tools in ways that take advantage of their established skills in task domains (Bikson 1987: 175).

3) Defining high-tech companies as those where R&D represents 5 percent or more of the firm's annual sales revenues, one study finds

significant differences in compensation practices. High-tech compensation managers "were generally of the opinion that the keys to motivating scientists and engineers are to provide them with the opportunity to do interesting work in their fields and to offer them incentive pay programs in addition to their merit pay programs (e.g., profit-sharing plans)" (Balkin and Gomez-Mejia 1985: 116). Incentive pay, profit-sharing, and stock ownership, as Figures 1-3 on the following pages indicate, are offered more frequently to "broad levels" of technical employees in high-tech companies than in traditional companies. "In high-technology industries there is a strong need to maintain an egalitarian culture and team approach in order to nurture technological innovation [compared to] traditional industry, where executives and managers are usually the only [stock and bonus] recipients" (ibid.: 118). A dual-career path policy is also more frequent in high-tech firms (likely to falter in practice, however, as it does in R&D environments).

4) The "career histories of middle managers and top managers, observations of reorganizations and attendant job changes, and discussions of career development needs and concerns in five major high-technology firms," suggest that "the single career concept for managers appears to have broken down" and "career variations...can be identified often enough to warrant [their] being labeled as new patterns" (Kanter 1984: 110). In high-tech organizations, there are more "options for career growth," a more fluid functional identification, "unheard of" kinds of tasks, more ambiguity in reporting relationships, more lateral or nonlinear career movement, and, among other things, the relatively early attainment of managerial

Source: David B. Balkin and Luis R. Gomez-Mejia, "Compensation practices in high-technology industries," Personnel Administrator, June 1985, pp. 111-113, 115-116, 118, 122-123. Figure 1, p. 113, Figure 2, p. 115, Figure 3, pp. 118.

Figure 1

COMPANY CHARACTERISTICS, HIGH-TECHNOLOGY AND TRADITIONAL SAMPLES (N = 105)

Company Characteristics	Sample Distribution (Percent) High-Tech (N = 33)	Traditional (N = 72)	Total (N = 105)
Number of employees			
0-499	63.6%	50.0%	54.4%
500-599	0	16.7	11.4
1,000-5,000	36.4	20.8	25.7
More than 5,000	0	12.5	8.6
Scientists and engineers as a percentage of all employees	20.5	14.5	16.4
Yearly R&D turnover	15.1	7.0	10.0
Sales revenues, 1982			
Up to $10 million	54.5	30.0	38.1
$10-99.9 million	9.1	39.0	29.6
$100-999.9 million	36.4	17.0	23.8
$1 billion or more	0	13.0	8.6
Average growth rate in sales, 1977-82 (mean)	31.6	27.0	28.3
Stage in business life cycle			
Growth	54.5	54.2	54.3
Mature	45.5	45.9	45.8
R&D expenditures as a percentage of sales, 1982			
Less than 1 percent	0	9.0	6.0
1-2.9 percent	0	55.0	36.0
3-4.9 percent	0	36.0	24.0
5-6.9 percent	36.4	0	12.0
7 percent or more	63.6	0	21.0
Profit rate, 1982 (mean)	7.6	8.2	8.0
Company product line			
Computers	9.1	4.2	5.7
Semiconductors	0	4.2	2.9
Electronics	36.4	25.0	28.6
Communications	9.1	4.2	5.7
Chemicals	18.2	4.2	8.6
Drugs	0	4.2	2.9
Instruments	9.1	0	2.9
Other	18.2	54.2	42.9

Figure 2

BASE SALARY COMPENSATION PRACTICES (Percent)

Compensation Practice	High-Tech (N = 33)	Traditional (N = 72)	Total (N = 105)
Average merit pay budget (mean)	8.0%	8.3%	8.2%
Maximum level of merit pay (mean)	13.6	14.9	14.5
Frequency of merit pay increases			
Every 6 months	9.1	0	3.0
Every 12 months	90.9	100.0	97.0
Equity pay adjustments			
Yes	72.7	54.2	60.0
No	27.3	45.8	40.0
Size of equity pay adjustment (mean)	12.2	8.1	9.7
Midpoints of salary grades			
25th percentile	0	5.0	3.0
50th percentile	63.6	71.0	69.0
75th percentile	27.3	14.0	19.0
Over 75th percentile	9.1	9.0	9.0
Compensation strategy			
Lead	20.0	22.0	21.0
Lead-lag	40.0	26.0	30.0
Even	40.0	39.0	39.0
Lag	0	13.0	9.0
Use a job evaluation system			
Yes	70.0	70.8	70.4
No	30.0	29.2	29.6
Pay communication			
Open pay policy	27.3	25.0	25.7
Pay secrecy policy	72.7	75.0	74.3
Dual career path policy			
Yes	54.5	33.3	40.0
No	45.5	66.7	60.0

Figure 3

INCENTIVE COMPENSATION PRACTICES (Percent)

Company Characteristics	High-Tech (N = 33)	Traditional (N = 72)	Total (N = 105)
Bonus compensation to all technical employees			
Yes	81.8%	33.3%	48.6%
No	18.2	66.7	51.4
Profit sharing for all technical employees			
Yes	54.5	33.3	40.0
No	45.5	66.7	60.0
Stock ownership plans for all technical employees			
Yes	72.7	25.0	40.0
No	27.3	75.0	60.0
Stock awards for key technical contributors			
Yes	27.3	4.2	11.4
No	72.7	95.8	88.6
Long-term stock options for key technical contributors			
Yes	54.5	33.3	40.0
No	45.5	66.7	60.0

positions (ibid.). Structurally, these translate into "a more varied and less rigid internal labor market," driven by several "environmental and situational variables" (e.g., labor force characteristics, the regulatory environment, industry characteristics such as rate of technological change, and firm characteristics, especially age). "Will other industries come to resemble the patterns identified with [high-tech firms], through emulation or as a necessity for survival? Or, on the contrary, will the relatively young high-tech firms rigidify as they age, settling into the more hierarchical patterns of the past?" (ibid.: 128). While there may be some convergence, it will not be "complete....Radical decentralization, loosened authority, and a change orientation will probably never characterize traditional industries with mature products in declining markets to the same extent that these features define and dominate high tech" (ibid.: 129). High-tech environments appear to have fundamentally different characteristics.

5) Computer specialists are increasingly likely to be employed as subcontractors or temporary workers. Between 1972 and 1982, the annual growth rate for programming and software services in those employment arrangements was 12.8 percent, exceeded only by nonoffice temporary help at 13.9 percent (Abraham 1987: Table 1B). After 1977, "the growth in programming and software services employment accelerated dramatically,...surging from 6.1 to 20.0 percent per year" (ibid.: 4). Likely to be nonstandard and nontraditional, the employment relationships of high-tech workers, add another dimension to the sociology of high-tech organizations. Some observers suggest that in having responsibilities that are encapsulated from the rest of

the organization, these professional and technical workers are becoming craftspeople who may have more mobility in labor markets and require less organizational training and socialization. The necessity for organizational "loyalty and commitment" which are staples of career systems from both employer and employee points of view is challenged by these developments.

6) Having been trained in and socialized by a wider computer science culture that habitually breaks conventional notions of appropriate work location and working time, computer professionals are the most firmly established occupational group among full-time permanent employees now working on an office-home pattern that substitutes for rather than expands time in the office. They may need to work at off-peak hours to minimize interference with other users' mainframe access. Their work can also be encapsulated (or as the manager of a systems development department put it, "their work is done in a vacuum"), and for the time that they must maintain their highest peak of concentration, their work interactions are also minimal. Or they may be among the relatively few employed in the least popular of computer jobs, that of software maintenance. Because these specialists are often in short supply, employers tend to give priority to their work schedules and site preferences. Computer professionals generally share an expectation of place-time flexibility, and to maintain their competitive position in a tight labor market, organizations will let them "do anything they want. They're our artsy people, the creative people. If they want to park cross-wise in the parking lot, we'd let them!" -- so said a human resources executive in a large manufacturing firm.

Finally, as Part 4 discusses in detail, one of the most important substantive sources of information about this new sociology of organizations where high-tech tools and work predominate is the proliferation of location- and time-independent communication.

Conclusion
Making Rungs More Visible

High-tech options for place-time flexibilities are like crowbars that uncrate received and unquestioned systems of meaning. The one that comes immediately to our attention is the relationship between appearance and productivity, presence and output. Until now, there has been little reason to question the validity of those equivalences. In the same way, until acknowledging the "glass ceiling" on women's advancement, was there much reason to question the personalistic basis of career development. High-tech options reveal even more of what is going on between the lines of career systems, for women and men alike.

"Remote management is good management." That is the main finding of studies of telecommuting. Managers plan better and design work more clearly. Being more certain about the outcomes expected from them, employees who have more latitude for self-scheduling can realize their expectations of greater autonomy. Batching their work between that which is best done at home and in the office puts to use their the same self-managing skills they use when working overtime.

There is no reason why "remote management" practices cannot become generally adopted as "new management" practices, no matter where or when people are working, no matter whether they are using computers or not. The more explicitly contractual relationship which

managers seem to require with those working at a distance may also be helpful in reducing the work and career ambiguities office-bound employees face. The U S manager of a group based in Europe was recounting how he made the rounds, not to monitor them but just to "give them a hug and tell them that they were important to the organization." Then he said, "You know, there are employees working in the same building as I do who are as 'remote' from their managers as anyone overseas. What they need is no different."

In general, the unique character of computer-mediated work remains little recognized in management strategies, whether for designing work processes or for developing training programs. Even where large investments have been made in heavy industry, there is little follow-up. Three years after converting to an automatic production system, the managers in one large pulp mill "admitted that training had been ignored....How do we explain this poverty of training in the face of a massive technological expenditure? In part, it reflects a profound underestimation of the skill demands associated with [the] technology" (Zuboff 1988: 254). Whenever employees have time and training to explore software possibilities, it is becoming apparent, the time is well spent.

Nor has the literature on organizational reward systems, internal labor markets, and productivity issues been relating place-time options to their central questions, perhaps because they continue to take for granted symbolic and cultural relationships that this discussion has been taking apart. That these meanings are tenacious, the end of the Atlanta Fed experiment in accountability and collegiality certainly confirms.

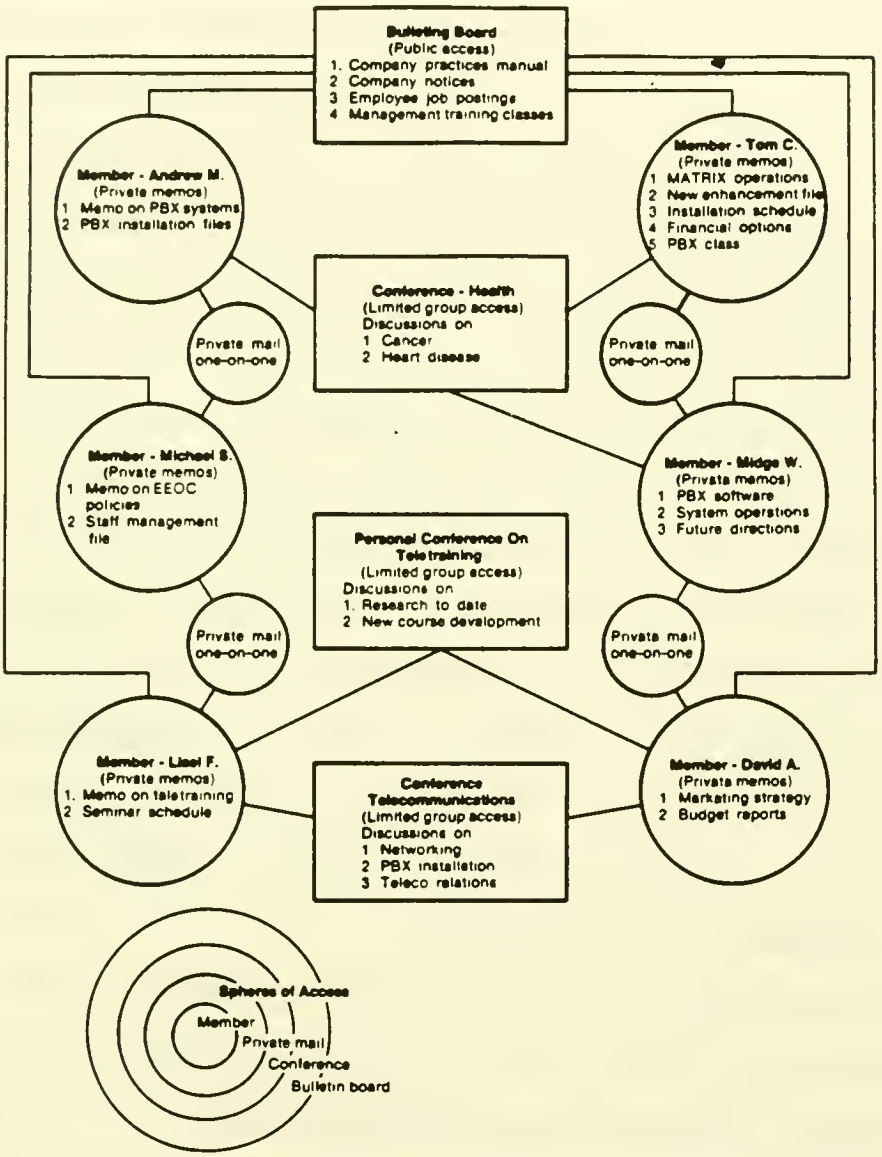
PART 4

PLACE-TIME INDEPENDENCIES IN BUREAUCRACIES

The traditional bureaucratic model for effective communication and coordination has placed workers within the same space at the same time. Now, with tools such as electronic and voice mail, asynchronous conferencing, joint online editing, electronic data interchange, voice-data options, cellular and mobile phones, workers can communicate directly with one another at any time of day or night, they can control the times and places they receive and send messages, and they can just as effectively carry out certain tasks away from their offices.

These tools allow for three basic kinds of communications, as the figure on the next page illustrates: the one-to-one and one-to-many distributions of electronic mail, and the many-to-many connections of computer conferencing. The first two replicate and expand existing communications via paper and, to a lesser extent, phone. The third is a modern invention that comes closest to substituting for in-person meetings by allowing for cumulative, interactive discussion. Computer conferencing is an archival and centralized data structure that allows people to join discussions on almost any number of topics, moderated by a leader, from any place in the world, at any time of day or night. The record can be printed at any point. The topics can be tightly focussed, as in project management, or discursive, as in discussions to define issues. Some forms of electronic mail allow for similar exchanges, but they lack the self-conscious structure and leadership of computer conferencing. By reducing the coupling constraints of meetings, conferencing creates

Teleconferencing Communications Options



SOURCE Courtesy Cross Information Company.

Source: Cross and Raizman 1986: 137

a totally new form of interpersonal communication.

For example, some very large organizations use computer-aided communication in project management. These electronic networks, they report, improve the quality of work products, allow them to deal with change more readily, and enhance employees' creativity. FORUM is the worldwide conferencing network of the U S Army, and in linking key specialists, staffing is possible throughout a 24-hour work day on an informal, interdisciplinary basis, both horizontally and vertically. The network reduces the necessity for meetings and lowers the time and expense of travel. General Motors employees are using computer-aided communication for coordinating design, engineering, and production specialists; GM hopes to reduce by half the length of the new-product development cycle which now involves international partners. Digital Equipment Corporation has a worldwide network on which its engineers can confer on over 500 subjects, including product development, technology, competition, and standards; out of these networks informal common-interest teams develop. The electronic mail system at ICL, Ltd. is presently supporting 7,000 employees, or 31 percent of its workforce (Management in the 1990s 1987).

But using computer-aided communication often requires adept participants, and that fact reinforces the new sociology accompanying high-tech work. The tools are not predictably reliable at the moment, as the employee-authors of a Hewlett-Packard case study candidly report, for example. "Difficulties with modems, data switches, terminal connections, and communications protocols have probably been more responsible than any substantial content-related issues, for keeping [Hewlett-Packard] people from using [a conferencing system].

Until connecting to a local or remote computer system is at least as easy as operating a microwave oven, access to services such as teleconferencing will be restricted to desperately dedicated users and to technical gurus" (Fanning and Raphael 1986: 305). These commentators also predict, however, that these difficulties will be overcome within three to five years.

This teleconferencing system was formally inaugurated to augment existing electronic networks to overcome the constraints on face-to-face meetings within the company's "engineering community." It had another, less overt purpose: to bridge the "more subtle isolation of R&D from the other functional areas of the company" such as sales, marketing, manufacturing, administration, and the field sales force ((Fanning and Raphael 1986: 291, 292). Yet high level managers, even those in favor of the new system, do not participate in either focussed or discursive conferences. "[O]ne manager who is a strong supporter...has said that he doesn't use [the system] because 'There's no one on CONFER that I particularly want to talk to' -- meaning that no other high level managers use the system" (ibid.: 298). Managers are notoriously low-frequency computer users.

From its analysis of RandMail's first 18 months of operation, the authors-employees caution there is "a tendency for research departments to be close to one another and administrative departments to be close to one another, but not to engage in much exchange. This may imply that organizations ought to pay careful attention to communications between admin/management and research professionals. This certainly will come as no surprise to students of industrial and organizational relations, but it is always interesting to see such

patterns reflected in real data patterns" (Eveland and Bikson 1986: 100). Another striking difference between administrators and researchers using this electronic mail system is the time of day each group makes the most use of it. Both managers and clerical workers "sharply concentrate their messaging in the early morning and late afternoon, while messaging by professionals is much more evenly distributed across the day." Moreoever, "there is some definite messaging activity among managers in the evening hours, perhaps reflecting work at home terminals," as there is also for professionals (ibid.: 97). These data suggest to me that professional work processes require both more interactive communication and more control over interruptions. Managers' work processes emphasize requests to subordinates whose day's work is to respond to them. Again, these patterns exemplify the new sociology in organizations.

Hand in hand with the new connective technologies goes a freer flow of information, it is said, as data and text processing are integrated with communications into a single system. But data access privileges are a common source of social power and political conflict within organizations. Professional level employees and their managers may experience this tension "as a strain between 'cosmopolitanism' and its free flow of knowledge in a professional community and, on the other hand, the 'localism' of industrial employers and their demand for exclusive or patented knowledge in the service of profit maximization" (Zussman 1985: 103). When work and workers are visibly contained within an office locale, management may be reassured that it has less to fear from professional level cosmopolites, but when they are joined together across organizational, state, national, and

international boundaries into "invisible colleges" that concern may be far less easy to contain.

One graphic description of computer conferencing's potential in bureaucratic organizations suggests that while it may aid cross-functional discussions it "is more likely to be used to subvert the bureaucracy."

> Bureaucratic organizations are like a stale block of Swiss cheese: a structure of rigid rules, but full of holes in the rules and regulations. Crafty bureaucrats can learn to find these holes and work around the formal structure to accomplish specific objectives. Often this is the only way significant change comes about in bureaucratic environments. With computerized conferencing, the potential would be increased for a group of motivated individuals to form and work in concern through private messages to find the appropriate way to circumvent the usual regulations and procedures; this of course would have a devastating effect on the organization -- the cheese would begin to crumble -- but perhaps a desirable one in terms of accomplishment (Hiltz and Turoff 1978: 142).

In one large organization with an active computer-aided communicationsystem, a "Women's Professional Improvement" conference was inaugurated, on a strictly enforced membership basis. It "quickly became one of the most popular, with 130 members sharing information aimed at 'helping professional women cope with life in a male-dominated corporation.' The conference often addressed issues related to the conflicting demands of work and family life" (Zuboff 1988: 382-383). Soon, the industrial relations division complained that the conference signalled "the possibility of female employees organizing a union" and the legal department complained "that the women might file affirmative action suits." The systems development manager printed out conference transcripts and the list of members and called a group of them "into his office...to explain the 'legitimate business purpose' of the conference. While the group's rationale was

accepted, they were told to exert more leadership in directing the discussion to business issues. In the aftermath of these events, conference membership dwindled" (ibid.: 383).

Computer-aided communication systems are viewed, then, both negatively and positively. Organizations first of all make considerable investments of capital and human resources to initiate and maintain them. They view them as assets. Then, as they break apart the traditional identity of organizational authority with space-time norms, they can then be seen as subverting legitimated organizational structures. Yet spatial and temporal options meet many of the criteria said to be conducive to innovation and productivity (Galbraith 1982; Kanter 1983) in bureaucratic organizations. On both these grounds, employees' communications are simultaneously trusted and suspected. Although managers may know that dissatisfactions are a fact of organizational life, computer-aided communication systems can put them in the position of seeing (or putting under surveillance) what they had been able to remain blind to.

To put the cultural and social sources of this tension in their widest theoretical perspective, I propose that electronic communication systems give rise to new sources and types of industrial conflict. They introduce new kinds of interstitial associations which both deconstruct conventional relationships of space and time to industrial discipline and control and transcend bureaucratic definitions of legitimate communication.

Transcending Space and Time: Social Fields

Computer-aided communication gives rise to social fields, which are

semi-autonomous, self-regulating, and interstitial forms of association. Although telephone and mail communications have long supported social fields, new computer connectivities increase their emergence to unheard-of degrees, whether as electronic mail systems having comprehensive distribution lists or national and international computer conferences on specific topics. One study of electronic mail found that 60 percent of messages would not have been sent without it; one positive consequence of this volume is that people are in communication "who otherwise would not know that they have anything to communicate about," and through these new "weak ties" organizational socialization and problem solving may be enhanced (Feldman 1986: 85). These connectivities also make decentralization more economically attractive, which may itself encourage alternative work sites and schedules.

I call them social fields instead of "groups" for several reasons:

--to capture their place-time independency and their ambiguous, self-constituting, and conceptual nature;

--to distinguish them from "interest groups" (which they may also be or develop into) in order to identify a formation for which organizations and participants both inexplicitly recognize;

--to distinguish their exchanges from the kinds of communications formally associated with an official structure. Those communications are not likely to show up on computer screens: even high-tech organizations appear to continue to use paper for most official and hierarchic communications.

Social fields differ, then, from the more concrete, self-aware, and legitimated relationships associated with assigned work groups or teams. They may, in fact, develop within formally

constituted groups. If and how social fields are transformed into institutionalized and bureaucratized communication systems or into concrete groups is an important long-term question.

A social field is as socially real to its members as is any designated group, and like all social formations, participants are governed by particular rules, norms, and meanings apparent to them (Kiesler, Siegel, McGuire 1984). They are self-regulating, yet only semi-autonomous, for although they "can generate rules and customs and symbols internally," they are "also vulnerable to rules and decisions and other forces emanting from the larger world" (Moore 1978: 55).

Social fields in bureaucracies by their nature exacerbate organizational tensions, on several grounds. They are organized on the principles of self-management, self-regulation, and semi-autonomy, which are customarily associated with the cultural domain of family-leisure. Thus they call into question the hierarchical and authoritarian principles associated with that of organization-work. Premised on the value of disclosure, sharing, cooperation, and mutual assistance, electronic social fields often run counter to the competitive and hierarchical values organizations are structured to maximize: "Some hope (and others fear) that the new media will make for fully egalitarian interconnected networks in organizations" (Eveland and Bikson 1986: 100): "It seems that in computer-mediated groups, where there are no salient reminders of status differences, communication is less closely regulated. Increasing the pool of information and at the same time mitigating the effects of status could contribute to organizational strength. It may also contribute to organizational instability" (Kiesler 1986: 54).

A manager in a high tech firm voiced his suspicions to me: "What are my software engineers actually doing when they signing on to world-wide conference topics? What am I to believe when they say they're doing that, and on company time at home?" Yet this vast conferencing system is company-developed and supported. Not visibly part of the formal organizational scaffolding, social fields are by nature ambiguous and unpredictable forces. In itself that fact can account for suspicions and negativism toward them (Perin 1988).

The literature most systematically exploring semi-autonomous and self-regulating social formations has been developed in legal anthropology (Galanter 1981; Geertz 1983; Moore 1978). Long concerned with the relationships between indigeneous or customary law and formal law, between private law and public law, between behaviors and norms, between legal facts and social meanings, this literature suggests how, over time, the indigenous normative order of a social group may, by processes of negotiation, influence wider social and organizational norms and practices. The notion of a "mutual adjustment" between formal and informal authority systems is well acknowledged in organizational theory. Informal groups are characterized as "bypass channels," "nerve centers," "gatekeepers," "cliques," "grapevines," "liaison devices," and "work constellations" (Mintzberg 1979). These are all types of social fields, in that all are semi-autonomous, self-regulating, and interstitial.

The proliferation of electronic social fields offers a rich source of data about this reciprocal relationship between structuring processes and the bureaucracy. Social fields are not by their nature "anti-structure." They are instead constituted by the regularities of

their relationship to an official structure. That relationship is not cast in concrete, but is a product of responses to real-world issues and exigencies. The problems being addressed design the form of that relationship.

In a case where structural innovations resulted, a strategic planning group consciously redefined itself as being a "discretionary coalition" deliberating on "key topics" (Pava 1983b: 132). Apparently disordered and disarrayed, deliberations constitute the actual gist of 'information work' for nonroutine tasks" (ibid.: 131). To meet these performance criteria, the group changed its physical layout and developed proposals "for enhanced information systems (data and telecommunications) that genuinely augment key deliberations.... Together, these changes would shift the basic pattern of organization away from an overly formal structure. The design proposed [is] a reticular organization in which a changing network of information exchange and authority arrangements grows to complement the rigid scaffold of a purely hierarchical structure" (ibid.: 134; see also Pava 1983a: 58, 64).

In another case, an innovation led instead to a strengthening of the traditional bureaucratic structure. Managers regarded an active electronic conferencing system -- a social field -- which operated in "stark contrast to the corporation's norms of information exchange," as ultimately unacceptable. They substituted for it another system which "was seen as a support device for formal communications and administrative services, rather than as the creative medium once envisioned by [the other system's] pioneers" (Zuboff 1988: 366, 384). In effect, senior managers used their power to deprive the social

field of its self-regulating, semi-autonomous, and interstitial features. As these cases illustrate, social fields are important elements in the structuring processes (adapting, negotiating...) by which the collectivities we call bureaucracies and organizations are constituted, and computer-aided communications are making these processes more accessible to study.

As both cases suggest, social fields reveal differences between the indigeneous interests constituting them and the legitmated, hierarchic, specialized, and routinized structures of bureaucracies. When innovation or change results, these differences have been perceived as negotiable and helpful. When no change is permitted to occur, the differences have been perceived as subversive. In any case, social fields, as interstitial associations, may call many of the essential properties of bureaucracy into question. Bendix defines these as being "precision, speed, lack of equivocation, knowledge of the documentary record, continuity, sense of discretion, uniformity of operation, system of subordination, and reduction of frictions....[For these reasons] bureaucracy surpasses honorific and avocational forms of administration" (Bendix 1956: 426).

By contrast, the discourses of electronic social fields are unlikely to become part of the documentary records of offices, yet they may have wide organizational influence; they may exacerbate rather than reduce frictions; not uniform, they are variable and unpredictable organizational elements; and they may come and go and interrupt a sense of organizational continuity. Social fields may thus seem to undermine the characteristics conventionally associated with organizational order, which can be interpreted either positively

or negatively. In transcending locational and temporal constraints, social fields in advanced information technology environments may transcend or, more importantly, be perceived as transcending organizational discipline and control. Again, that can be evaluated either positively or negatively.

Often considered to be social "mechanisms" or "devices," social fields deserve if not require a more robust place in organizational theory. In having a systematic relationship to formal structures, such social fields stand not as sideshows to the main act but are, through these processes, structuring and constituting it (Giddens 1984, 1985). This is the main work of the "technology" of the formal and informal rules of bureaucracy. In concert with advanced information technologies, organizational "structures" sometimes take new forms (Barley 1985); sometimes these processes result in reversion to traditional bureaucratic forms (Zuboff 1988: 362-386).

Back Regions and Reservations: Low and High Legitimacy

The less routine, less predictable tasks which predominate in the repertoires of professional-level employees have a fundamental affinity with electronic social fields. Those participating in worldwide conferences and interorganizational electronic mail systems, for example, are likely to be engaged in the searching, scanning, commenting, drafting, suggesting behaviors most characteristic of problem-setting. These work processes are least routine, least predictable, and characterized by "high variability" and the "unanalyzable search methods" associated with "nonroutine organizations" (Perrow 1970: 90). Yet they are necessarily located

within a formal bureaucratic structure. The results of these more diffuse, less focussed exploratory behaviors are more unpredictable than those used in computer conferencing about well-defined projects, for example. One criterion for Hewlett-Packard's selection of its conferencing system, based on a year of pilot testing, was its dual capacity "to support both focused work and intellectual stimulation" (Fanning and Raphael 1986: 293).

That diffuse quality can lead managers to assign low organizational legitimacy to social fields. "At least one key manager has strongly discouraged his staff from participating...(forbidden is not in an HP manager's vocabulary, but the effect is the same), on the grounds that it would waste their time" (ibid.: 299). In a period of "relatively flat sales...attention naturally turned to internal efficiency and cost cutting," and the conferencing system "came under increasing scrutiny. How to measure, and then justify, its costs, benefits, and return on investment, is a difficult problem for which we have not developed satisfying solutions" (ibid.). The pervasive difference between professional and managerial work processes -- between search behaviors and decision making -- is another element emphasized by the new sociology of high-tech organizations.

The "back region" is a type of social field having low organizational legitimacy; the reservation is another type with high legitimacy. Back region describes coffee and lavatory breaks on the shop floor, places where workers exercise freedom from total control (Giddens 1984). Factory management regards these as being places and times for malingering or, worse, sabotage. The various forms of distance working made possible by computer-aided communication

(including working at home for part of the week) are highly susceptible to being seen as back regions. The very invisibility of computer conference members, like those who work at home, puts them automatically into a back region.

Social fields, field forces, and working at home are, then, susceptible to organizational distrust. The expression of it differs perhaps for each of these, but the distrust grows out of a basic conceptual differentiation between center and periphery: "Central workers are likely to be dealt with in terms of responsible autonomy, while the expendability of peripheral sectors makes them vulnerable to direct control" (Thompson 1983: 135). Working at a distance yet organizationally employed, workers may not necessarily be expendable, but their invisibility translates into much the same sort of organizational attitude. As members of a field force, employees may be treated as though they are invisible=expendable. Their organizational value is determined via the "direct control" of monetized productivity measures, such as sales volume. If working part of the week at home, their value is justified only by "deliverables."

Field forces complain, for example, of their "isolation" from a central office which "never understands" the conditions of their work -- a lack of empathy or interest that expresses a fundamental negativism toward office absence. Culturally, those not in a central office are regarded as "quasi-employees," much as those who are in contract, part-time, or temporary organizational relationships are (Rohlen 1974). They receive less organizational legitimation, expressed as less employment commitment. In all, both physical

distance and social distance, as our culture constructs them, independently attenuate legitimation and trust. This attenuation is the source of "the office imperative."

Given the cultural dominance of the "central office" and its encoding of spatial and temporal discipline, the degree of legitimacy of all field-based work, even when formally constituted by a bureaucracy, is less than that of office-based work. Then, when office work is removed to the cultural domain of home, it can appear to repudiate managerial authority entirely and be least legitimated as a result. Hence, as previously discussed, the low levels of trust that managers display even toward high performance employees.

Reservations, project teams, or "skunk works" are longstanding, fully legitimated social forms for research and development work. Bureaucracies segregate this work from shorter-term interests and functions. Distinctive spatial and temporal boundaries are drawn protectively around such groups. They are likely to work on abnormal deadlines and schedules, and they are either brought together in designated work spaces or they are tied into their own electronic network, perhaps with a secret password. Management theorists view reservations as being a means of enhancing innovation and productivity. They enjoy high legitimacy. For example, employees working in project teams, require connectivities to those outside of their organizations "that will enable them to stay in touch with developments in their specialties," while those whose primary allegiance is to a functional department yet "matrixed" to a joint effort need an internal "coordinating technology" that can augment or substitute for telephoning and meetings (Hauptman and Allen 1987: 22).

Social fields, external or internal, are essential to these work processes.

The combination of their focussed and diffuse computer-aided communication enhances legitimation and yet at the same time detracts from it.

> It's ironic that computer teleconferencing is not a medium chosen by upper [Hewlett-Packard] management for their own use, since their support is necessary for its continued existence. It is simply not a management tool, if by management we mean those above the level of project leader. These are all the valid reasons and several strange reasons why this is so....[One reason is that the] potential for real change caused by a medium which allows widely separated people to aggregate their needs is, in fact, quite frightening. Some managers correctly foresee that such a aystem can be most upsetting to the current established order, and do not participate in it as a result (Fanning and Raphael 1986: 297-298).

The new sociology is marked by differences between those who perceive themselves as upholding organizational order and those who they perceive do not. Those perceptions are likely sources of conflict.

Conclusion
Organizational Subversion vs. Organizational Productivity

The relationship between administrative power and its physical and temporal embodiments has been examined by Foucault (on prisons), by Goffman (on asylums), and by Weber (on the state). Each has been concerned with "'complete and austere institutions,'" and although their analyses reveal much about the nature of such power, these institutions do not necessarily express it "more clearly than the other, less all-embracing organizations" (Giddens 1984: 154). Unlike prison administrators, for example, where cooperative work among inmates is not their objective, workplace managers

> are concerned not only with the time-space differentiation and positioning of bodies but also with the co-ordination

> of...conduct [which] has to be channelled in definite ways to produce collaborative outcomes....The time-space 'packing' of groupings of individuals in confined locales, where continuous supervision in circumstances of co-presence can be carried on, is obviously highly important to the generation of disciplinary power. But the demand that [people] work together to effect some sort of productive outcome gives [workers] a basis of control over the day-to-day operation of the workplace which can blunt supervisory efficacy. Supervisors and managers are as aware of this as anyone, and often build that awareness into the type of disciplinary policies they follow (ibid: 157).

That is, despite their power prerogatives, bureaucracies require consent, and workers use this as a means of negotiating some degree of autonomy, which Giddens defines simply as "the capability to 'have acted otherwise'" (ibid.: 156). Goffman's term is, "'colonization,' the construction of a tolerable world within the interstices of managed time and space. Social fields are such "colonies," wherever they fall on the continuum of legitimation.

As I have said, it is customary to expect, indeed even to reward, work done at home, but only if it is done beyond regular working hours. I suggest that overflow work at home is a sign of the pervasive legitimacy and authority of the employment relationship. Overflow work thereby sustains hierarchy. Working at home during the regular workweek, from the most definitive "back region" of all, transcends and undermines hierarchy. Physical co-presence signals employees' subordination, which distance from the office, a symbol of self-management, contradicts. The organizationally employed person who works at home during regular working hours represents the most extreme form of self-management possible, and, as such, is today perceived as being an organizationally less legitimated and therefore a disorganizing, negative force.

At this moment, early data suggest, electronic social fields are likely to be regarded ambivalently from a managerial perspective, being seen as both a source of organizational subversion and organizational productivity. Because they are more likely to be populated by professional and technical specialists than by those directly responsible for profits and performance, electronic social fields can also reinforce the well-rehearsed cultural differences, largely grounded in their differing conceptions of time, between the R&D, production, and business sides of the house. And differing conceptions of intellectual freedom:

> There were dramatic differences of opinion as to the future of electronic communications in DrugCorp. On one side were those managers who emphasized the need for efficiency and control. DrugCorp was not an "intellectual democracy," they said, and it never would be. Some senior managers confessed that they viewed the spreading of [the computer-conferencing system] "like a disease that must be walled off and contained"....On the other side were those professionals (some of whom also had managerial responsibilities) who believed that mounting competitive pressures would finally place such a premium on the free flow and creative use of information that it would be necessary to return to the earlier goals of the...system. They recognized that managers traditionally depended upon controlling the flow of information as an important device for exercising control. These "obsolete organizational formulas," they claimed, would not survive in a world where significant advantages accrue from a more effective internal sharing of information in the service of learning and innovation (Zuboff 1988: 385).

Computer-aided communication systems make even more concrete the new sociology of organizations.

The problem-setting behaviors of employees who use electronic networks both scholars and some managers regard as being sources of creativity, innovation, and productivity. According to one study of innovation within organizations, the "incentives for initiative derive from situations in which job charters are broad; assignments are

ambiguous, nonroutine, and change-directed; job territories are intersecting, so that others are both affected by action and required for it; and local autonomy is strong enough that actors can go ahead with large chunks of action without waiting for higher-level approval," and in general "bureaucratic" rules are scarce (Kanter 1983: 143).

Those are likely to be the very conditions which social fields both develop out of and support. They are also the conditions most threatening to traditional bureaucratic concepts of the chain of command. They are conditions which blur the lines between more and less legitimated relationships, formal and informal rules, official and unofficial structures. Advances in American creativity, innovation, and productivity make heavy demands on the tolerance for ambiguity.

PART 5 CONCLUSION
HABITS, OPTIONS, AND PRODUCTIVITY

Whatever else is meant by the current canon that U S organizations need to become "flexible" and "adaptive" if they are to improve productivity, these qualities will probably apply last to place-time habits. When time is regarded only as being equivalent to money -- as being solely an economic resource or commodity -- rather than a social resource as well, it will continue to stand as an unadorned variable in productivity equations. And space as well: the full expression is, the number of people working in each place and the time they take to produce goods and services. Given such equations, social inflexibilities will prevail.

When place and time are instead seen as being constructed out of understandings of discipline and control, trust and commitment, sanction and reward that give at least equal weight to social heterogeneity, self-management, family concerns, and the goal of optimum job performance and satisfaction, only then will 20th century options begin to receive the consideration due them. As I have stressed, it is that consideration which is important, not whether alternative work schedules and sites are more widely adopted. If the principles are acknowledged, then situation by situation both habits and options can be evaluated in their terms.

Alternative work schedules and sites reveal American ideas about the limitations of trust, autonomy, judgment, discretion, and self-management. These in turn reveal other meanings of status. Circularly, status is equated with the degree of worker autonomy and employer trust: "whether one wishes more variety, autonomy,

challenge, or interpersonal influence" on the job, it is possible only to achieve it "by advancing in the status hierarchy" (Rosenbaum 1984: 8). Alternative work patterns for white-collar workers signal a blend of management with self-management, in the same way that industrial relations policies for "participatory management" and "quality circles" do in blue- and pink-collar workplaces. Both these options have been a long time in coming, and they have a long way to go.

Present-day habits of external industrial discipline and control are grounded chiefly in the belief that these guarantee optimum individual and organizational productivity. That may not be a false presumption, but it may also not be true for all industries and for all occupations (Tables A and B show significant differences between goods and service producing industries in the adoption of flextime). Yet the relatively low rates of flextime adoption in general reveals that this cultural system is more upheld than questioned, yet at a time when American productivity is in serious trouble.

Misrecognizing Symbol for Function

The confusion of status with work processes and the conditions of work is endemic. With higher status goes the chance to break out of locational and temporal constraints, it is believed. Higher status implies precious release from the yoke of unquestionable and onerous duties and deference.

Whether hierarchy "actually does enhance organizational performance" remains the subject of "remarkably little systematic research" (Baron 1984: 60), despite longstanding debates on this subject. Having more satisfying work nevertheless remains tied to

mobility and stratification, even though variety, autonomy, challenge, and influence could be designed into work processes themselves, regardless of employees' organizational positions -- for example, job rotation, semi-autonomous team work, profit sharing, incentive pay, worker ownership. The cultural question is whether time and space work flexibilities can come to represent ideas about functionality instead of being exclusively associated with reward, prestige, or authority. And, as well, whether the unbreakable strands linking work to every other domain of life are acknowledged.

Employers and employees see any relaxation of space-time norms as being an employee "benefit." The cost, presumably, is management's gift of trust and a greater degree of freedom than are inscribed in inflexible norms. A recent analysis of ways that "employment policies, practices, and fringe benefits [could] be responsive to the personal and family needs of employees" (Kamerman and Kahn 1987: ix) suggests that flexible time is the resource most valuable to workers and the least likely for employers to offer -- flexible time defined as emergency time for dealing with family illness, as personal time for important business, as sufficient and paid disability leave (including maternity leave), and, most optimally, a less onerous way to achieve personal flexibility and to meet personal emergencies "through some combination of personal days, vacation time, sick leaves, and unpaid leave" (ibid.: 68). Hewlett-Packard initiated such a policy, whose success has led to imitations, whereby "personal leave, vacations, and sick leave have been integrated into one paid leave package of three weeks (for new employees), and employees can use the time as they wish: for vacation, personal illness, family

illness, or personal time" (ibid.: 229).

However, these authors emphasize, a disparity remains between benefits on paper and those actually accessible to employees. Personal sick leave, for example, often is not allowed to be used to care for a sick relative; personal days off have to be scheduled in advance, so they are useless for dealing with emergencies. Moreover, where employees may use personal sick leave to care for a sick relative, those days are not added to their own sick leave (ibid.: 230). Trust and self-management have their limits.

Perhaps the most important source of flexibility, this study reveals, is "the next-level supervisor." But this is not a simple matter of "a superior's sympathy and understanding. Units also are different. In some, flexibility adds to attachment and morale. If problems are created, they are viewed as manageable. In other units, the supervisor or unit pays a price if there is a gap in staff coverage" (ibid.: 69). The productivity dimensions of personal time are, then, not being treated as structurally meaningful, but merely interpersonal.

The difficulty employers face in providing flexible time arrangements may certainly be practical: employees can vary considerably in needing for alternative work patterns, making it hard to establish predictable schedules and equitable policies. High tech offers another kind of option these days: software tools that help to manage complex staffing systems, such as hospitals, restaurants, and industries working on a 24-hour schedule could be adapted to offices.

Specialists in organizational development suggest that flexible hours policies are a good way to teach supervisors to trust employees.

Their discussions take an absence of trust for granted. Flextime "allows the most choice and encourages the most trust on a day-to-day basis. If an employee can choose work schedules at a firm every few years to fit life stages, that is an enormous expansion of choice. But the right to choose working hours daily, to fit variations with the life stage, is an even greater creation of the opportunity for employee choices, and often induces supervisory trust" in situations where employees come to work before and/or after supervisors are present. "[F]lexible hours give supervisors valuable experience in trusting subordinates. Thus flexible scheduling is primarily a trust-inducing strategy for change rather than one that is trust based" (Cohen and Gadon 1978: 112). The fact that not even half of American organizations have chosen flextime programs as a means of "inducing" trust suggests they also may have few other such strategies in place.

Even among occupational groups already supposed to be enjoying higher levels of trust, fewer than one-third are currently on a flextime schedule, and many fewer (who are organizationally employed) are also experiencing a "flexspace" option. When an alternative work site is not an option but a requirement of a field-based job, as we have seen, managers and employees alike see it as a "reward" of "greater autonomy and flexibility." The unspoken comparison is between these workers and less trusted and less "privileged" employees whose office presence is believed to be necessary to their discipline and control and the productivity those are presumed to guarantee.

On the other hand, temporal and locational rigidities may protect employees from organizational demands. Inflexible work

schedules may signal "official recognition" that employees have the "right to be professionally inaccessible at times," in the same way that paid leave time gives them the right not to be "ever available" to work demands, as doctors and clergymen are expected to be, for example (Zerubavel 1981: 157).

> Hourly pay and a rigid schedule of hours is "precisely" the aspect of bureaucratization that protects the modern individual from being entirely "swallowed" by what L. Coser has called "greedy institutions." It is precisely the rigidity of the temporal boundaries of our professional commitments that allows us to claim some privacy. It is precisely the low-status technician, orderly, secretary, or aide whose private time is institutionally protected from more than that of any physician. In short, the very same institutions that are directly responsible...for much of the rigidification of our life -- namely, the schedule and the calendar -- can also be seen as being among the foremost liberators of the modern individual! (ibid.: 166).

A general cultural expectation that professional-level employees will be "ever available" seems also to be the basis of workweeks that more likely than not (are expected to) exceed 40 hours on a regular basis. Is this organizational "greed"? Are too few professional and technical workers employed for the work loads there are?

The prevalence of a single norm may have still another source. The American equalitarian ideal requires that social differences and privileges be played down or denied, as a way of preserving fairness or the semblance of it in hierarchical environments. The telecommuting advice literature stresses the need for explicit organizational criteria by which employees are eligible for an office-home schedule, in order to avoid the office malaise of perceived unfairness. In one old-line manufacturing firm that allows no deviations by any employee from a rigid arrival-departure schedule, supervisors were having to work overtime during a rushed period but,

being exempt employees, they were not getting paid more. In response to their complaints, upper management decided that in fairness, for the duration all other exempt employees had to lengthen their days too. "We're all in this together" may be one expression of the American ideal of equality.

What "this" is, however, is the question. The workplace seems to share in the same aura as the cultural systems of "total institutions," as Goffman calls them, of military service, asylum, and prison. Each of life's domains is to be strictly compartmentalized from every other.

> The time-space separation of different sectors of social life may indeed be the condition of the large-scale operation of disciplinary power....There is no doubt that disciplinary power can be systematically generated only by the packing of human beings into specific physically demarcated settings. But Weber is surely right to say that administrative discipline is most effective precisely when other aspects of individuals' lives are separated out from it. For it involves the regularized application of criteria of conduct that do not accord with the enactment of activities in other spheres of life (Giddens 1984: 154).

The sharp line drawn between home and work is still another cultural product of this totalizing aura -- more a mythic than a real line, as we have seen.

There is already an inequality of vulnerability to organizational demands, as defined by federal legislation requiring some workers to be paid overtime. Yet that same inequality is unrecognized in the uniformity of standardized work schedules. Those represent equity, it is believed, when in fact they simplistically deny heterogeneity. Policies that equitably recognize a plurality of organizational interests are the issue.

Compartmentalization and Productivity

Connective technologies bring to organizational life the possibility of transcending limitations not only of time and space, but of data, experience, example, analysis. They make more permeable the social boundaries around entire organizations and, within them, they help to transcend artificial boundaries between functions, work groups, and individuals. These connectivities, merely by existing, create unprecedented opportunities for expanding organizations' and individuals' stores of information, knowledge, and insight. Her job in a high-tech company, one manager felt, left her nowhere to go, and although she doesn't yet consider herself enough of a "technie" to contribute, to prepare herself for another position, she regularly studies several computer conferences on particular topics.

Computer-aided communication enables organizations to reach outside themselves, by contrast to computers' "automating" and "informating" functions, which are more internally oriented (Zuboff 1985). The geographic scale at which the possibilities of transcendence and new kinds of social integration are being acknowledged in Europe is markedly different from the U S (Korte, Robinson, Steinle 1988). The Commission of European Communities has sponsored comprehensive studies of "distance working," not only for the familiar connectivities between central and branch offices and between home-based and office work, but as a tool for regional economic development. Sharing some similarities with "off-shore" enterprises, these studies suggest that those which are "peripherally-based" may be able to bring jobs to underdeveloped regions, as well, of course, to suburban areas (Holti and Stern 1987).

In the U S, as far as I know, advanced telecommunications for publicly supported economic development programs have not been proposed.

But connective media not only provide bridges, they can also dig deeper moats. A major issue for productivity is the compartmentalization between functions and specialities that computer-aided communication transcends, but may also encourage. These systems can reinforce existing patterns of poor communication between management/administrative functions and professional/technical work, giving rise to the irrationality of giving strategic autonomy to one hand and tieing up the other with operational red tape, for example.

This compartmentalization also affects the different value placed on diffuse and focussed work processes: at one end of this continuum are the specific outputs of focussed work, at the other, uncertain gropings toward innovations. Employees can both "look busy" and be busy doing focussed work, and when dealing with nonroutine tasks, they may only be able to be busy, thinking, doodling, talking, reading. I heard much contempt for their bosses from professional and technical workers who knew that they were expected to look busy and be at their desks. "What do appearances have to do with the ideas I had this morning in the shower or during my drive into work?"

Compartmentalization takes another form: between workplace and community. Do overworking employees then have the time for the public service that a democracy expects and that citizens hope to be able to give? Is organizational time allocated for community service and service to the professions? If the trend toward a core workforce augmented by a periphery of temporary or subcontracted workers expands, will the career pressures experienced by those in or trying

to get in the core deprive them of time and energy for participation in home and community life? Productivity measures are not internal to firms alone; the society as a whole gets its vitality and quality from its citizens who are necessarily also its workers.

Mythic Ladders and Frontiers

Overtime at home, office, or on travel is supposed to translate into promotion; putting in an appearance at the office is as well. These invisible rungs of professional workers' careers are constructed out of habits of thought about organizational commitment and loyalty, hard work and reward which depend on both time and place. When the rungs break and career expectations turn into disappointments, organizational repairs may console "losers" with a script of "constant lateral movements, of alternating movements up and down the levels of a hierarchy, or of a sequence of positions lacking clear distinction in prestige [which] apparently mitigates perceptions of demotion or stagnation and thereby sustains an individual's commitment to the collective" (Barley 1988: 36). To reward or to console, the status ladder prevails.

The American promise of opportunity has been turning into a myth in recent decades, but its allure remains. The founding charters of American culture rely on spatial and temporal images, the frontier and the ladder: the spacious skies of unlimited opportunity; rungs that evolve heavenward in an eternity of progress. Both images deny stasis. Plateaus and rungs are only resting places, unless, of course, they signal failure. Being in some kind of forward motion through social time and space is an American ideal.

What is needed are systems of meaning through which people can understand their experiences and their prospects, meanings that are truer to the concepts embedded within those charters. I see these as being vulnerability and risk: the frontier, a locus of all that is unknown, is a state of utmost vulnerability and risk, as is the ladder, on which, the spiritual warns, "Your foot might slip and your soul get lost." What is missing in American culture are images that reflect those realities of omnipresent risk and honorable failure. The most prevalent metaphor for life in large organizations is a sports metaphor: It's not whether you won or lost, but how you played the game. There's honor in failure. That is how Americans learn to live with fair failure.

But as studies of career systems suggest, the tournaments aren't fair when not everybody knows what the rules of the game actually are -- that age can work against employees, no matter the quality of their work or the evidence of their loyalty and commitment, for example. Under the influence of the opportunity myth, Americans have become habituated to misrecognize unfair failure.

The "Limiting Assumptions" of Hierarchy

The history of attempts to "democratize the workplace" politically reveals that more battles have been lost than won. At issue are assumptions underlying domination, which are rooted historically in ideas about property rights and the ownership of labor. Not quite 30 years ago, Douglas McGregor proposed "management by integration and self-control," as a way to "abandon [the] limiting assumptions" of "hierarchical structure, authority, unity of command, task

specialization, division of staff and line, span of control, equality of responsibility" (1985 [1960]: 246, 15).

Those "limiting assumptions of hierarchical structure" are represented at their most extreme in American labor law, which mainly deals with the rights of unions and of management. I suggest, however, that those which James Atleson has found in labor laws and judicial opinions form a generally available yet often unspoken system of meaning through which the relationship of all employees to employers is understood (Atleson 1983). This system of meaning, taken as a given in the nature of the things, assumes asymmetries in the employment relationship. Professional workers experience the axioms of this system, even as they also use them with others.

The first assumption Atleson identifies is that management has "an assumed inherent right...to maintain" the "continuity of production" (Atleson 1983: 7). This assumption may lie behind place-time inflexibilities, for example. It certainly underlies the expectations of exempt workers' overtime. A second assumption: "employees, unless controlled, will act irresponsibly....greater employee freedom will result in 'anarchy'" (ibid.: 7-8). Certainly, this belief underlies the discouragement and neglect of self-scheduling and self-management. The third assumption "relates to the limited status of employees in the management of the enterprise....Employees, clearly the junior partners...owe a measure of respect and deference to their employers....[an] obligation of respect, involving both speech and nonverbal behavior" (ibid.: 8). Common human decency and good manners are to be valued in every setting, of course, but this assumes a natural limit to

egalitarianism. The consultant who couldn't tell his senior partner that their work would go more smoothly if only he also used voice-mail exemplifies the general force of this assumption.

A fourth element of this employer-employee system of meaning: "an important focus is on the workplace as the property of the employer. The right of employees to communicate with each other...must compete with shadowy notions about employer ownership....[which] seem to support decisions that reject the legitimacy of employee efforts to regulate their work effort" (ibid.: 8). This recalls managerial ambivalence toward computer-aided communication. This assumption, Atleson observes, comes into play when employees' "rights to solicit and pamphlet for union organization on company property are limited by property interests, unrecognized in the statute" -- which recalls the particular incident in which the employer interfered with a computer conference on professional women's issues on the grounds that it might foment unionization.

Finally, a "fifth assumption involves the belief, often made explicit, that employees cannot be full partners in the enterprise because such an arrangement would interfere with inherent and exclusive managerial rights of employers. Again, statutory rights are restricted by pre-1935 notions of managerial freedom. The courts often assume, in the absence of supportive statutory language or legislative history, that the statute gives employees only limited participatory rights in the management of the 'common enterprise' (ibid: 8-9). R&D workers' experiences of strategic autonomy dampened by operational control speaks to the prevalence of this assumption. The absence of explicit promotion criteria and information about

advancement realities also can be understood in terms of this assumption of unilaterality.

Nineteenth century habits die hard: today's "statutory rights are restricted by pre-1935 notions of managerial freedom," Atleson observes. These remain preserved in the system of meaning with which we understand employer-employee relationships.

> The language of master-servant, with its focus on bonds of loyalty, subserviance, and one-directional joint endeavor, fitted nicely with the needs of enterprise. [This 19th century] law was based on a society in which everyone was presumed to belong somewhere and in which in all spheres of life "subordination to legitimate authority was thought to be a natural, inevitable, even welcome accompaniment of moral grace and practical virtue." The household provided the model, and the master had inherent power to prescribe for his family, as well as for his servants....Some terms, such as duration and wage, could be contractual, but "it was never contemplated that the parties would design their own relationship." The predominant aspects of the relationship were taken as given and were based upon custom, ideology, and law which defined expectations and obligations" (ibid.: 13-14).

This familiar history of domination remains a force in the present, and so is never forgotten, perhaps not even by professional workers who have heard their ancestors' work stories. Yet even those without an historical experience are likely to have a current one, as they see how their skills and autonomy can come under the thumb of those limiting assumptions. Myths of open opportunity further prevent recognition of their true position. How professional level workers stand politically within a hierarchy of power and authority is only one question. Another is how they stand with respect to this cultural system controlling the conditions of their work. They may be as unready for revolution as blue-collar Americans are, but they are, apparently, just as actively searching out avenues of escape from boredom, career ambiguity, and job insecurity with debt, drugs, drink,

divorce. Needless to say, these are personally, organizationally, and socially costly.

A New Metaphor for the Workplace

Career theorists have been modernizing their concepts and their recommendations in the last decade or so. "Their essence seems to be to foster a 'culture of diversity'...by sanctioning discontinuity and variety....to [encourage a career system] based on reciprocity between individual and organizational needs....that [relies] on temporary structures, on work assignments geared to generalizing rather than specializing skills, on flatter hierarchies that devolve responsibility locally....[and to] guard against the rigidity produced by organizational procedures that assign an ability status...in a relatively permanent way. In the long run what this means is that careers will have to become discontinuous, organized into independent segments. Underlying such a notion is an emphasis on flexibility and change rather than on stability, which will require a 're-vision' of time tables and age-specific notions of career stages" (Bailyn 1988b: 18). These changes also require different concepts: interdependence rather than autonomy and bureaucratic hierarchy, more ways of showing appreciation, more openness than tradition (ibid.: 18-19).

Whether these bear any more direct relationship to optimum productivity than the hierarchical model they hope to replace also remains unknown. They deserve an equal chance, therefore. New technologies only throw into still sharper relief the continued sway over managers of "Theory X" and the "limiting assumptions" of distrust of and disdain for workers which motivates it.

Without more detailed understanding of the actual work processes of professional level employees (a gap the career-theory literature also bemoans), they are left to the imagination or summed up as "roles" or "functions," which remain empty of content. Work process analysis has been left, in fact, to the Left, and it has been confined mostly to blue- and pink-collar work. The concrete logics of modern work processes themselves cannot therefore be used to replace the political logics of hierarchy. This metaphor persists, compounded by that of a militaristic "chain of command," which, it is believed, guarantees desirable productivity.

Work reforms that propose to increase "participation" and greater latitude for "self-management," express a paradox. This rhetoric asks those in authority to decree the value of pluralism and workplace democracy. The levers of reform thus remain those of power, rather than being grounded in the logics of productive processes themselves. Power is a sign of ownership, of course, and of the prerogatives accruing to responsibility and risk. The fallacy lies in equating power to wisdom. The recent record of American productivity calls that equivalence into question.

Until the hierarchy metaphor itself changes, it is possible only to tinker with it -- as in proposals for "flatter" hierarchies. Perhaps the metaphor I've been leading up to might help to break out of stereotypical ways of thinking about organizational discipline and control structures -- a <u>textile</u> metaphor. The tension between warp and woof represents that between the interests of managers and employees, yet within a stable frame where people have to acknowledge their mutuality and negotiate their differences. Their working

relationships are acknowledged as being interdependent and thereby intrinsically equalitarian, each essential to production. Weaving entails options and choices: of pattern, texture, looser or tighter designs, whereby employees' strands of skills can be combined in many ways at different times. The distribution of honor and prestige should then be more widespread, and on variegated grounds. This might seem to be a metaphor suited to the new style of matrix organizations, which favor team and project work across functions. But because matrix organizations exist within hierarchies, individuals receive the rewards. Competition continues to outsmart cooperation. Finally, the image should also express the ongoing, recursive processes of social negotiation and organizational construction. It should make organic and functional metaphors redundant. But it too cannot avoid the question of legitimate authority and the power of leadership: who is to sketch out the cartoons for the tapestry and the patterns for the loom?

What Is To Be Done?

American productivity may be standing at a cultural crossroads between 19th century habits and 21st century options. The fork is more pronounced perhaps for highest paid and best educated white collar workers who are more likely to think that options are their due. Their expectations of greater autonomy and control over their own destinies have been poured into tuition and early sacrifices -- and those of spouses and children -- because these have promised more discretion, greater variety of work, and more self-management. How their work is habitually conceived, designed, and managed today is

likely to lead more of them to disappointment than to fulfillment. Lagging behind are innovations in what we might think of as the technology of trust, on which every humanly productive process depends.

Systems of authority and power, whether in hierarchies or on looms, are not the issue: their "limiting assumptions" are. These are matters of culture before they are matters of policy. Within every "organizational culture" as within every human association is its ethos: the emphases it places on the assumptions, beliefs, values with which it necessarily constructs the world and its place in it. Culture is an elemental condition of human life, but an ethos is a matter of choice. The moral fabric of an organization is its ethos -- moral, because it is chosen from among alternatives and because it justifies and guides everyday behaviors. Ethos is the "soft" technology on which all "hard" technologies depend not only for their reception, but for their very development as well.

The reasonable goals of reasonable people can be reached in many different ways -- profit-maximization, rationalization, productivity, work satisfaction. How organizations choose to do so reveals their ethos. On the brink of the 21st century in a plural world, the concern should not be which ethos to elevate over all others. The issue is whether organizations have in place methods by which its members can choose. The problem lies not in having conflicting interests, but in not having them and not having channels for working them out.

What do workers want, in every domain of an enterprise? They want work that contributes to their self-esteem and earns others'

respect. Because work is defined by the nature of the relationships a person has, the kinds of relationships it is possible to be in are therefore decisive. Participation in a variety of kinds of relationship marks the significance of the historical transformation from status to contract: people could choose which kinds of relationships to be in. If there are only superior-subordinate relationships available, for example, then self-worth and respect are predetermined according to set formulae of deference and domination. If there are, in addition, cooperative relationships available, where mutuality and equality prevail, then the sources of self-worth and respect are more variegated. Natural leaders may emerge, as may a self-constituted, consensual ranking system.

The problem of authority and hierarchy is not their existence, but that together these have, historically, prevented people from experiencing as full a measure of self-worth and others' respect as they may be capable of enjoying. People can be prevented from being in settings where they can display facets of their strengths and weaknesses and earn merits to offset their demerits. That is what we mean by reaching our potential. From the various settings of life and the relationships they offer, we get a number of readings of self-worth and respect. Yet the discontinuities between them are a significant source of modern stress -- why must home be "a haven in a heartless world"?

It is not because their jobs are "upskilled" that workers using computers demand more pay, in both blue- and white-collar settings, but because in having a new relationship to their work, they are partaking of the greater degree of self-esteem and respect that, they

know, earns others more. Their skills, as management keeps saying in resisting these demands, haven't changed. But something else has, in bringing them closer to the intellectual work associated managerial work and further from the manual, routinized labor associated with blue- and pink-collar work. "The informating consequences of computer technology challenge the distinction between manual and mental work as it has evolved in the industrial bureaucracy," and as all workers learn to deal with "the complexity and visibility of information....the experiential divergence that has defined the boundaries between managers and the managed is diminished. Under these conditions, what is 'managerial' work? What are the values that animate the daily pieties of deference and command? Are these pieties themselves made dysfunctional and obsolete?" (Zuboff 1988: 243).

John Rawls, in A Theory of Justice, suggests that the "most important primary good is that of self-respect...a person's sense of his own value, his secure conviction that his conception of his...plan of life...is worth carrying out. And...self-respect implies a confidence in one's ability, so far as it is within one's power, to fulfill one's intentions. When we feel that our plans are of little value, we cannot pursue them with pleasure or take delight in their execution. Nor plagued by failure and self-doubt can we continue in our endeavors. It is clear then why self-respect is a primary good. Without it nothing may seem worth doing, or if some things have value for us, we lack the will to strive for them. All desire and activity becomes empty and vain, and we sink into apathy and cynicism" (Rawls 1971: 440). In maximizing this "primary good," organizations stand a better chance of reducing "apathy and cynicism" and optimizing job

involvement and productivity.

The interests of employers and employees unite around productivity, then. Embedded in Japan's high productivity is its ethos of maximizing and maintaining self- and others' respect. The Japanese know, without knowing, that these are social products, not individually created characteristics. Americans, brought up on myths of individuality and the rhetoric of social Darwinism, have to keep learning that these orginate as social resources which only become personal.

What is to be done? Policy recommendations, it should be clear from all that has been said, have first to pass muster with the culture. The failure of many good ideas to take hold is testimony to the strength of silent systems of meaning standing in their way. The aim of this discussion has been to make the culture more audible, to be in a better position to consider whether to change, accept, reemphasize, or discard its assumptions and presuppositions. Trust and suspicion, loyalty and commitment, self-esteem and social respect, loyalty and betrayal, fairness and unfairness, cooperation and conflict, control and autonomy, reward and sanction...constitute the very nap of the moral fabric of each workplace. How this fabric is cut to fit around new tools and different ways of organizing and being accountable for work is critical not only to organizations, but to this society as a whole.

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